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## The Indian Economist.

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### THE WAR.

WHEN writing our protest of August last, against the hasty and one-sided utterances of the English press concerning this war, we did not expect that the views we then expressed would so soon become general and even popular. A mistaken estimate of the relative power of France and Germany; belief that the Emperor had secretly made preparations for the war; and the dread of seeing Europe overrun by the armies of the second Empire with peril to ourselves, destroyed all insight on the part of Englishmen at home into the real merits of the quarrel and the true origin of the war. It is now everywhere known, that while the rest of Europe was longing for peace, and was looking forward to a general disarmament, one power in their midst was playing them false, and making in secret the most gigantic preparations for war. Minutely informed of the real resources of the power against which the attack was to be directed, but anxious to save appearances by casting upon that power the responsibility of inviting the attack by some act of national folly, the Prussian Court, in violation of its plighted honor, did not scruple to make a third Power, Spain, the innocent occasion of awakening that excitement in Paris, which was to furnish the occasion of a war, the object of which it is now hardly denied, was to complete the work of 1866, and place the crown of German Empire upon the head of the Prussian King. War was a ne-

cessity for the completion of this policy, and the world now stands astonished in presence of the gigantic force organized for its attainment in the foundries and barrack squares, the hospitals, the railways, and the very churches of this peace-loving, non-aggressive Germany. Let the fact have due weight and be pondered carefully, that this is the *third* war within the short space of seven years which this most guilty power has wantonly provoked. Concerning the two first of them, there never has been but one opinion. They were as guilty, unprovoked and deadly offences against public law, as were ever committed in the darkest ages of the world. The last of the series is being prosecuted with a fierceness and savagery unknown in modern times—and what for? Pure lust of territory; for the annexation of two provinces of France, the exceeding richness of which, far more than their strategic importance, is their real attraction. The people of these provinces hate the Prussian rule, the conscience of Europe protests against their forcible separation from France; at the outset of the war, the Prussian King told the world that he was animated by no lust of dominion; and yet while peace upon satisfactory terms has been offered to him for months, he continues to prosecute the war for purposes which were scrupulously kept out of sight at its commencement, and even ostentatiously disavowed. It has now come to light that Alsace and Lorraine have been secretly coveted at Berlin for years past, and that its gigantic preparations for a war with France had, as their full ultimate purpose, the wresting of these provinces therefrom.

A more guilty or causeless war was never prosecuted than that which the Prussian King has been waging since the surrender of the French Emperor at Sedan. It is his guilty ambition and that alone that is clothing Germany and France in mourning, as it clothed Denmark and all Central Europe in 1864 and 1866. The blood is in no other skirts than his; while the kingly fanatic daringly appeals to heaven to witness the righteousness of the cause, in which his sword is slaying men, women, and children in whole hecatombs. He is making peace between the two countries an impossibility, and should he momentarily succeed in his ambition, will bequeath a heritage of hate to both peoples, that will fill Europe with confusion for a century to come. Himself, the real author of the war for pure purposes of ambition, he contrived to persuade the unthinking world at the outset that the French Emperor, who personally shrank from the contest, was its author. The mask has fallen earlier than we expected from the sinister policy which was its occasion, and reveals features in exact accordance with the whole history, with every tradition of the Prussian monarchy.

It strict accordance with her traditions, she trumps up an ancient claim to these provinces. Her whole growth has been founded on pretended claims of the same order, followed by violent seizure and conquest. The policy of aggrandizement by force or fraud, which Frederick the Great exemplified in his seizure of Silesia, was nothing new or original in the history of the State he ruled. That Frederick really believed in his own pretended claims is impossible. It is better to say simply with Mr. Carlyle that, "he knew what he wanted and was determined to have it." In the gallantry of his defence against the coalition justly formed against him, we are apt to condone the guilty ambition which called it into existence, as no one can read the story of the last campaign of Napoleon in 1814 without being almost ready to resent the just Nemesis which denied him success.



In the first partition of Poland, that crime which Europe has been expiating for a century past, the Prussian battalions of Frederick the Great played the leading part, two considerable provinces being the wages of his sin. A more material gain was that achieved in the second partition of the unhappy kingdom, under the notorious Herzberg. After a display of diplomatic fraud without parallel, in which the Prussian minister became the pretended ally of the unfortunate Poles, only to betray them to his accomplices, the kingdom was suddenly seized by them in concert, and divided between the three Powers. To this day, the wounds inflicted by that great crime upon Europe remain unhealed, and to this dark page in the sinister career of Prussia, do modern historians unhesitatingly ascribe the unsettlement, confusion, and bloodshed in Europe of the century that has since gone by. In 1794, Europe witnessed with dismay the treachery of this power in admitting the claim of the French Republic to the Rhine as its frontier, by the treaty of Basle made thereunto, while Austria in alliance with ourselves was striving to arrest the revolutionary torrent that threatened to overwhelm Europe. This respectable power, not merely abandoned the Rhine to the Republic that she might weaken Austria, but offered to make common cause with any of the minor German States that would join her in retiring from the contest. Many of the minor Princes were carried away by this defection. In the *Mackensbury* letters recently published, we find our ambassador at Berlin writing to the English ministry on the 27th June (1794) as follows:

"I should feel undeserving of any indulgence if I could impute to myself the failure of this great measure, (the effort to keep Prussia faithful to her engagements); but no experience nor habits of business, no prudence nor care can read so deep into the human mind, as to foresee that a great sovereign and her ministers would be so regardless of their personal honor and so forgetful of their public interests and glory as to refuse to be bound in June by a treaty ratified with their full consent and approbation in May."

Ten years later in 1805, the Bismarck of that day, Haugwitz, to whom the fortunes of Prussia were committed, by an act of matchless perfidy, put the finishing stroke to its betrayal of the liberties of Europe. He had come to Vienna to declare war against Napoleon who was dangerously situated. But the battle of Austerlitz had been fought and lost by the Allies. With matchless effrontery the Prussian changed the whole object of his mission, congratulated the Emperor upon his victory, and agreed to "enter heart and hand" into alliance with him, upon receiving Hanover as the price of his treachery, although Prussia was at profound peace with ourselves at the time. The treaty is one of the foulest passages in this foul Prussian history. The conduct of Prussia, said Mr. Fox, Minister of Foreign Affairs at the time, "is a union of everything that is contemptible in servility with everything that is odious in rapacity. Other nations have been reduced by the fortune of war to cede many of their Provinces; but none except Prussia has been reduced to this lowest stage of degradation, that of being compelled to become the ministers of the rapacity and injustice of a master."

Haugwitz contrived by this treachery to extricate Prussia with momentary advantage from its perilous position, but it led to the overthrow of the kingdom within eighteen months, and the temporary blotting of its name out of Europe, until Napoleon himself fell. Stripped of half her territory, and reduced to a mere exercise ground for French troops, her policy for the next six years was that of meek servility to her master. In obedience to his commands, she declared war against all his enemies as her enemies. A Prussian army formed part of the great host that invaded Russia in 1812. When disaster overtook the French armies, this respectable power of course ranged herself on the side of their enemies, and fought them with a malignity that the more generous of the Allies never betrayed. When peace came in 1814, and the landmarks of Europe had to be readjusted, she manifested in secret concert with Russia, an unscrupulous spirit of rapacity, that England, Austria, and France were on the point of declaring war against her rather

than endure her claims, when the escape of Napoleon from Elba frightened her into readiness to act with the allies against whom she had been intriguing with her whole might. In May 1815, just before the battle of Waterloo, the Prussian King, to reassure his people and animate them to the conflict, by a solemn proclamation engaged upon the termination of the war to establish constitutional Government throughout his territories. The war was no sooner over than these pledges were impudently recalled, and Prussia is to this day without the constitution, solemnly promised to her people more than half a century ago. We cannot follow her later history; but she has been the same ever since. She is an utterly treacherous, base power, respecting engagements with her own people as little as with foreign powers, and cynically defying public opinion of her conduct, where there is no fear of an armed force behind it. Her "brutal" and "unscrupulous" conduct, (to use Mr. Gladstone's language,) towards Denmark is fresh in every one's mind.

The war of 1866, two years afterwards, was wholly unexpected by Austria. For while distrusting Bismarck, the Court at Vienna believed they might count on the loyalty of our pious King, and never suspected for an instant the duplicity and falsehood of the Prussian Court and its Minister. It is almost inconceivable, but true, that for some time after the signature of the treaty with Italy, by which Prussia had engaged to declare war against Austria, "Bismarck continued with matchless effrontery and perfidy to protest that the sentiments of the king were friendly to Austria, and even complained that Austria was meditating an attack on the Prussian dominions." On the 14th June 1866, Saxony, Hanover and Hesse Cassel voted, as they had a perfect right to do, against Prussia in the Diet, and this power which had acted in the best possible manner throughout these disputes, then and then declared the German Confederation at an end. On the 15th, (next day) she telegraphed terms to all three States giving them till evening to decide, Saxony refusing the terms, and Hesse and Hanover being silent. At midnight she declared war against all three. Pretty sharp work this for the mild non-aggressive power England is to assist in establishing. Austria was not prepared for war any more than France is now, while Prussia was. She was in the very midst of retrenchments in her military expenditure and reductions in her army; and when the treachery of Bismarck could no longer be masked, it was too late for her to make the necessary preparations to encounter the attack. It is worth while to contrast the conduct of the French nation towards Italy with that of the Prussian Court. So purely selfish was the alliance at last made with Italy by the Prussian King, so completely indifferent was he to the liberation of Venetia, that he had offered Austria in 1864 to lead the Prussian forces against Italy in the event of any attempt to liberate Venetia. He cared not one iota for the freedom of Italy; and when he finally allied himself with Victor Emmanuel, did so only at the instance of the French Emperor, who was anxious to see his work in the Peninsula completed, and to spare France the sacrifices which a second war with Austria would entail upon the Empire. The foreign policy of the fallen Emperor was marked throughout by a spirit of chivalrous readiness to assist the weak against the aggressions of the powerful. You may search the records of European diplomacy through without finding a trace of chivalrous action or generous sentiment in Prussia. It is the impersonation of pure selfishness throughout its history, a mere record of perfidy and rapacity. In now seeking to force an impossible treaty upon the French nation, it is moved solely by considerations of greed, while it impudently masks them under a cloak of religion.

NOTE.

We observe that several of the most experienced publicists of India agree as to the merits of this war. Mr. Macmillan, Mr. Madden and Mr. Wilson, read its history precisely in the same way as ourselves. Mr. Macmillan writes to the *Times* of India:—"The justification of Germany against the aggression of Prussia, and the justification of Prussia in the

"dictatorship of Count Bismarck. The *Times* took the lead in directing public opinion against France and in favour of Prussia, but if I am not mistaken, the usual reaction is beginning to set in, and the papers are beginning to have the courage to question whether the public interests of the Continent are likely to be promoted by the extinction of the balance of power, the entire annihilation for the present, of the power of France, and the establishment of an irresistible and inexorable despotism in Europe, supported by the most powerful army we have on record, inasmuch as to the advantage of numbers, is added the still greater importance of the most perfect armament ever invented. This despotism cannot be expected to last, but what bloody wars will it cost us to subvert it?"

### THE TRUE PRINCIPLE OF ASSESSMENT.

We have repeatedly given expression to the admiration which we feel for the Settlement Officers of India, and avowed our conviction that they are the very ablest administrative body of men in the world. Their education has been special and highly technical, their opportunity unique, and their work simply magnificent. Just as conspicuous, however, as are the merits of these gentlemen on the one hand, are the feebleness and incapacity of the revising authorities set over them, on the other. The critical faculty would seem to be positively dead on the part of those whose duty it is to revise the work of our Settlement Officers, and to report thereon for the guidance of the State.

The work of review as it is now done, is so hollow and so perfunctory as to be a complete farce. Whatever the Settlement Officer has done or left undone, whatever he proposes or disallows, is all but certain to go up to Government, with the endorsement of the reviewing authority thereon. Instead of testing the work by the application of clear and definite, and well-considered principles thereto,—reducing the settlements to an harmonious and consistent whole—they appear to pass the revising authority as a mere matter of course, and are handed up to Government for final sanction, with a few stereotyped, complimentary remarks upon the judgment, energy, and ability with which the Settlement Officer has done his work. And yet it is upon this work of review that all the administrative power of the State, and the higher qualities of our statesmen, require to be concentrated. It is necessary to bring the recommendation of the Settlement Reports in every case, to the test of some principle which has been ascertained and intelligently adopted for the regulation of our attitude towards the land. Such a principle is that which Sir George Wingate announces, when he tells us that our rule should be—

*To make the new Settlements as liberal as the exigencies of the State will permit.*

For want of some definite principle of this order for the guidance of the reviewing authority, to whom and not to the Settlement Officer its application belongs—the State has been betrayed into sanctioning a course of settlement proceedings in the Central Provinces, which ignores "the exigencies of the State" altogether as an element for consideration in the matter. Had the authors of these proceedings possessed a definite hold of their final end and purpose they would have seen from the first, the impossibility of the course upon which they had entered. In their anxiety for the cultivator, they lost sight altogether of the necessities of the State, and of the fact that unless the land was made to yield a certain amount of revenue, there was nothing but bankruptcy before the Provinces, or the casting of a local deficit from them upon the rest of the country. Neither Sir Richard Temple, nor Mr. Morris, nor Sir William Muir, seeing to have discerned that the interests of the State needed to be cared for, as much as the interests of the cultivator. Practically, their principle, in opposition to Sir George Wingate's, has been—

*To let care of the cultivator, and the State will take care of itself.*  
We could not more exactly express, we believe, the error that is embodied, and is being still made, throughout the country, in

our recent settlements of the land. Instead of carefully considering the financial position of the Government, the difficulty of raising revenue by new and untried means, the capabilities of the land, and the fact that we are settling it for a generation of years to come, the inevitable growth of the expenditure of the State, the vast outlay to which it is committed upon public works the precariousness of some of the sources of our income, and the fact that we may be overtaken at any moment by a desolating famine, or the great calamity of war—instead, we say, of such considerations intelligently and seriously being brought to bear upon these all-important land settlement proceedings—they are reviewed in the most careless possible spirit, and with a sort of *laissez faire* notion that if we only will take care of the cultivator, the State will take care of itself. This notion is one of those half-truths with which the world is filled to the ruin of the great public interests which such delusions commonly effect.

A Settlement Officer in these days has simply to shew that the assessment which he proposes is a mere quit-rent upon the soil to get his work sanctioned as a matter of course. Let one of these gentlemen come forward with a proposal, to levy, say, one half the *true* rental of the soil upon the land in view of the necessities of the Imperial Treasury, or even for the purpose of important Public Works in the district, and his report will sound like a discord upon the ear,—and be promptly disallowed. Our Settlement Officers have come to discern this everywhere, and nothing is more common consequently than for them to propose deliberately rates of assessments which they know do not represent one-twentieth or one-thirtieth of the value of the harvests of late years. We have got into this reactionary mood towards the land from the ascendancy which the North West famine of 1861 gave to a school of amiable doctrinaires at Lord Canning's elbow at the time, of whom the late Colonel Baird Smith and Sir Bartle Frere were the leaders with Sir Richard Temple for one of their chief disciples. The temporary ascendancy of this school has brought upon us the whole of our present embarrassments, and it will only be by the complete subversion of their influence that we shall obtain financial ease. To shew how delusive and purely perfunctory are the proceedings of the authorities who profess to review the work of our Settlement Officers when handing their recommendations up for sanction, we direct attention to the following facts.

If there are any two districts of India in which the conditions under which the land is cultivated, are directly the opposite of each other—they are perhaps Nimar and Raepore. In Nimar one-fourth only of the population is agricultural, three-fourths consisting of the urban class. In Raepore, on the other hand the population are all but wholly agricultural. Most of our readers, we suppose, will understand how enormous an advantage this fact gives the agriculturists of Nimar over those of Raepore. In the second place, Nimar is the thoroughfare of an immense traffic, with a railway also passing through it. Raepore, on the other hand, is the *Ultima Thule* of civilization, at the ends of the earth. It lies 180 miles beyond Nagpore, and has neither a road into it, nor out of it. In one word, every fact in the economic condition of the one district is favorable to the cultivator; in the other every condition of profitable cultivation is wanting. They have got a triangle however in Nagpore, left them as a legacy by Sir Richard Temple, upon which every land assessment in the Provinces is sketched as a matter of course,—the result being about 60 per acre as the right assessment of the land. Well, in both Nimar and Raepore, settlement operations have just come to a close, and the assessment proposed by the officers respectively engaged in the work, is as follows:

Raepore by G. T. K. Hewitt, Esq., .....	5 annas.
Nimar by Capt. Forsyth .....	10 "

The reviewing authority (Mr. Morris in both cases) assured the Government, under date of 22nd November 1869, that "the Settlement Officer of Raepore shews satisfactorily that the adoption of an average revenue rate of 5 annas per acre was warranted by the circumstances of the district," and recommended the settlement being sanctioned for 20 years, "the very low standard of 5 annas per acre being a sufficient guarantee of the moderation of the assessment."

Five annas per acre is a very low standard in Raepore, and yet ten annas per acre is considered a just assessment in Nimar, where, in any part of India whatever, the State might properly levy an English rental.

## REASSESSMENTS IN BOMBAY.

I

We called attention in our last issue to the fact that the 30 years' leases of the Bombay Presidency are now beginning to expire, and pointed out the necessity, in revising the assessment, of broad and comprehensive regard being had to the requirements of the State. The Government of Bombay in renewing these leases, will, we trust, give the Settlement Department in other parts of India, the lesson they so much need. To Bombay, belongs the credit of administering the Land Revenue upon principles in accordance with the ancient law and constitution of the country, and with a practical skill which has shewn the harmony which exists between those principles, where intelligently applied, and the well being of all classes in the State. None know better than the Settlement Officers of Bombay themselves, how vast a revolution has taken place in the last 30 years in the condition of the cultivator in Western India. At the time when the leases now expiring were issued, the agriculture of India was at the lowest point of depression, and the assessment was based upon a wise and politic recognition of the fact. A vast revolution has occurred since, and it is a necessity that the Bombay Government should be impressed with the fact, that this altered condition of things must regulate our assessments in the future. It is no longer the depressed condition of agriculture that must rule and control our course; but the necessities of the State. The old leases with their very low rental, have done their work, and the State rights in the soil must now be insisted upon. These new settlements everywhere, are emphatically the subject of our time, while unfortunately we have a Finance Minister who seems unable to discern it.

The least inquiry suffices to shew that the assessment upon land in the Bombay Presidency, represents the merest fraction of the produce; and no just reassessment will be made until this fact is clearly and fully discerned. All idea, therefore, of making the old assessment the basis of the new one, must be completely disallowed and got rid of. Omitting Sindh, the gross amount of Land Revenue annually contributed by Western India in the last 30 years to the Imperial Treasury, has fallen short of Rs. 2,50,00,000, owing, partly, to the large proportion of the soil which is alienated from the State as Inam land, but chiefly to the very low rates at which the old assessment was fixed, in view of the depressed condition of the ryot.

The gross nominal amount of the Land Revenue of Bombay has been Rs. 3,50,00,000 for the last eight or ten years, but this sum includes about Rs. 40,00,000 a year from Sindh; and a miscellaneous (sayer) revenue of about Rs. 70,00,000. Owing to the very imperfect character of the statistics to be got from Bombay, it is impossible to tell the exact pressure of the assessment per acre upon the soil. But the general fact is clear and indisputable, that the assessment has come to be an anachronism in view of the altered condition of things in the Presidency. In the absence of exact statistics to guide us, let us attempt to shew the annual value of the harvest of Western India, upon the same principles we have applied to the North West and Central Provinces. The population of the Bombay Presidency is about 11,000,000, and as jowaree is the staple food of the masses of the people, the average consumption of cereals cannot be less than lbs. 2 per head per day. The prices, meanwhile, of wheat, bajree, jowaree, and rice, all in immense consumption, have certainly not been lower, upon an average of the last ten years, than 10 or 11 annas (20 to 22 lbs.) per rupee. The food harvest alone, therefore, of Bombay must have been of the annual value:

$$\text{lbs. days. lbs.} \\ 11,000,000 \times 2 \times 365 = 8,030,000$$

Thus, to begin with, the land has yielded these ten years past, an annual harvest of about forty millions sterling of food alone. But the standard of living in Western India is very high. Half the population moreover, is urban, whose consumption of vegetables, fruits, oil, condiments, meat, milk, ghee, tobacco, pan, betel, goor, sugar, is enormous. Then there is provision for a very considerable population of Europeans and wealthy

Natives with their abnormally high expenditure, and of troops. Estimate again the value of the fodder consumed in the cities of Western India, and the firewood, and now add to all this the report produce of the soil. This last item we must make some effort to grasp. In round figures, then, there are under cotton cultivation in the British territories of the Western Presidency (exclusive of Sindh) about 2,000,000 acres a year, producing on an average 80 to 70 lbs. of clean cotton per acre, or about 370 to 400,000 bales a year. Now the average worth of this cotton to the ryot for the last 10 years, has certainly not been less than £12 per bale. We believe it has been very much more than this. Adopting this price, however, let us now attempt to measure the value of the harvest of Western India:

1.—Cereals for 11,000,000 persons	£40,000,000
2.—Fruits, vegetables, oil, condiments, tobacco, pan, betel, ghee, cocoanuts, sugar	£10,000,000
3.—Fodder, milk, buttermilk, ghee, poultry, mutton, meat, hay, straw, &c.	£10,000,000
4.—Fuel, firewood	£5,000,000
5.—Exports 2,00,000 randlees (at 10% lower)	£5,000,000
6.—Seed corn for next harvest	£1,000,000
7.—Provision of reserve food stores	£1,000,000

It is impossible for us to fill in the figures required to complete this estimate. Our purpose in drawing it out, is simply to compare the gross produce of the land with the annual assessment upon it during the last 10 years. We are ourselves satisfied that the last ten harvests of Western India have been of a minimum average value of £50,000,000 sterling a year:

1861-1870 Ten harvests, say	£50,000,000
1861-1870 Gross land revenue	£25,000,000

Now these facts require to burn themselves in upon the minds of the Settlement Officers of the Bombay Presidency. A Land revenue of £25,000,000 a year, when that revenue includes the rent and nearly all the taxes of 11,000,000 of people, raising a harvest of fifty or sixty millions sterling a year, is an absurdity. Thirty years ago, £25,000,000 probably represented one-fifth of the whole harvest.

1840-50	Harvest	£12,500,000
...	Assessment	£2,500,000
1860-70	Harvest	£50,000,000
...	Assessment	£2,500,000

We look to the Government of Bombay to teach the rest of India, what all must learn upon this subject, that it is "the land" which is to defray the cost of the administration. We pointed out in our last issue, that the ryots of Western India are making the State pay the most exorbitant rentals for land required for the Cotton Farms. To obtain second quality land for these experiments, the Commissioner has to rent it of the ryots. In Sattara he has had to pay 30s. the acre, the assessment upon the ryot being 6s.; in Khandeish 20s.; in Broach 60s. the acre; in Ahmedabad 22s.; in Dharwar 20s. to 24s. and in lower Sind 15s. The average of these quotations is 26s. or 13 Rupees an English rental per acre. This is the rate the ryot is exacting from the State when it wants land for its cotton experiments. The State, meanwhile, charges the ryot a fifth or sixth of this rental.

It is necessary to point out, moreover, that Bombay is barely paying its way, by its present contribution to the Imperial Revenues. This fact will probably take some of the Bombay papers by surprise. It is nevertheless true. Bombay is barely paying its way. Indeed, if we charge to current revenue, the large amount spent therein on Public Works, there is an annual deficit in its accounts, instead of a surplus for the Imperial Treasury.

At present we are content simply to lay this fact before the Bombay Government, for its bearing upon the new leases about to be issued in that Presidency. And this brings us to remark that we should be glad to know from Bombay precisely what is being done at this moment towards their renewal. It is more than three years since the Indapur talook was re-settled, and although settlement operations in the Presidency have been actively going on since, the Bombay Government has not taken the public into its confidence concerning them. When will the Government of India learn that the bureaucratic

secrecy in which the most common and ordinary work of the administration is carried on, is a profound mistake. If any good were to be accomplished by it, we should be the last to complain about it. But nothing but evil results—nothing but evil can result—therefrom. It is most important that we should know upon what principles the new land assessments of Western India are being made. The leases are beginning to fall in rapidly, and the Government cannot renew them with propriety, without taking the public fully into its confidence, and into frank consultation with it.

### THE EXCISE.

In these days of financial embarrassment and unpopular taxation the Imperial Government might do worse than turn its attention to one source of revenue, which is the least exceptionable of all our taxes. No one can offer the faintest objection to the levy of a duty upon the consumption of liquor and intoxicating drugs—the only question is, how we should collect it—our object being just contrary to that which is aimed at in managing other taxes on consumption, for we are expected rather to discourage than to encourage production. Now for many years the Indian Government lay, and still lies to some extent, under the charge of stimulating liquor-drinking for the profit of its revenue. People declared that whereas the old Governments (our predecessors) discountenanced the use of spirits and drugs by all methods in their power, on religious and moral grounds, the British rulers treated such prejudices with the cynical disdain of a money-making Company, and that vast and pernicious increase of intemperance has grown up under our administration. All this was asserted with that careless disregard of any thing like scientific observation and inquiry which characterizes discussion of public business in India. When we consider that the Native administrators never attempted to manage or regulate the Abkarree at all, that half the stills were in private hands—having been assigned away with the Land Revenue to jagirdars and others—that the authorities were powerless to put down smuggling, and that the provinces which we from time to time annexed, were almost always in the last stage of exhaustion from mis-rule—we may comprehend why the Abkarree revenue has since expanded and flourished wonderfully under a powerful State monopoly among a people whose numbers and wealth have been multiplying at a rate unprecedented. Nevertheless, it is true that the British Government in its earlier days made no attempt to control the abuse of the old Native system (which we continued) of selling by auction the right to distil and sell liquor within certain territorial limits.

In later times, however, when the local administrations had risen to a sense of their moral responsibilities for the spread of deleterious habits, an important change was made. Several Governments abolished the old farming system altogether, and substituted what is called the Central Distillery system, which allows no stills to be set up except in an inclosure, where all liquor distilled is measured and taxed at so much per gallon. The State monopoly is no longer farmed out, but retail shops are licensed to sell the liquor which has already paid its still head duty. This radical reform was not, however, enforced throughout the British dominions as an Imperial Resolution; it was only introduced at different periods into one or another Government or prefecture according to the wish or opinion of the chief local authorities. It has never been universally extended, inasmuch that at this moment we have the two systems working side by side.

The old farming system, whereby the exclusive monopoly of distillation and vend is put up to auction, exists now without change or modification from its early type throughout the Presidencies of Madras and Bombay, excepting, perhaps, the Presidency of Madras. In Bengal Proper, and in Burmah, the system seems to be a mixed or bastard one; there are licensed distilleries, and there are farms of the right to sell liquor. In the Central Provinces, they attempted to work the Central Distillery system in all its purity, but relapsed into compromise

and dabbbling with contractors; in the North West Provinces and in the Punjab, the new method of Central Distilleries is practised according to strict rule and principle, with occasional insignificant deviations.

Let us now look at the results obtained by these different methods of raising revenue. The subjoined figures are taken from the Finance and Revenue Accounts of the Government of India for the year 1869-70.

Provinces.	Population.	Excise on spirits and drugs.*				Remarks.
		Gross Receipts.	Net Receipts.	Rate per cent. on the gross receipts which the gross duty per head of total population collected.	Rate per head of population.	
Madras	265 Lakhs	57,00,220	54,27,460	4.157	0 5 5	Farming system
Bombay	135 "	44,08,280	38,98,720	.937	0 5 3	do
Bengal	405 "	63,93,180	53,08,680	5.094	0 2 8	do
North Western Provinces	301 "	17,02,570	13,52,460	7.787	0 0 9	Still head duty and abop licence
Punjab	175 "	8,14,120	7,43,130	9.638	0 0 8	do
Oudh	85 "	7,93,480	7,41,670	4.687	0 1 5	do
Central Provinces	91 "	9,39,400	8,74,210	5.257	0 1 7	do
British Burmah	23 "	10,61,480	8,86,980	.137	0 7 4	Farm and licensed stills.

\* NOTE.—Includes Excise on Opium. But as the collection of the Opium Tax by sale from Government stores costs nothing, the cost of collection of the Liquor Tax would be much enhanced by excluding receipts from Opium.

Two things in this table are at least worth notice—the great disproportion of rate per head paid to the Abkarree revenue by the people under different Governments, and the difference in the cost of collection. We make all allowance for wide variations in the habits and tastes of diverse classes and races in India; and we are fully aware of the extent to which drinking goes on in great seaports. Nevertheless, after careful abstraction has been made of all the causes which swell Abkarree receipts in Madras and Bombay, there is still something which catches attention in the fact that Bombay with its 135 lakhs of people pays 44 lakhs of rupees for spirits and drugs, while the Punjab population of 175 lakhs pays 8 lakhs only. One-half of the Punjab is Mahomedan, but there are also a million and a quarter of hard drinking Sikhs, while all the lower castes are fond of liquor when they can get it. Then compare Madras with the North West Provinces: the former pays 57 lakhs, the latter, with a larger population, 17 lakhs. Is the diversity of climate, creed, and nation sufficient to account for this remarkable inequality? Oudh and the North West Provinces are homogeneous, but in Oudh, the net receipts are much larger in proportion to area and numbers. Burmah has a long sea-board, and a people without caste or religious prejudice; so it is not to be wondered that her Abkarree is most profitable of all. We should mention that the returns do not permit us to distinguish the excise on retail sale of drugs (including Opium) from the excise on drinks, but the estimates for 1869-70, present,

like the liquor tax, curious variations in different territories.

It is superfluous to point out that wherever the Central Distillery system prevails the revenue is low, and the cost of collection high, in comparison with the Provinces under any variation of the farming system. The avowed object of the Central Distilleries is to raise a maximum revenue from a minimum consumption, and the supporters of that system will declare that a falling revenue signifies rising morality, that the Government has wisely and nobly enforced temperance by sacrifice of its income. If this be true, we have not a word to say; hardly any money price would be too great to pay for the suppression of liquor-drinking in India, or in England. But this is just the point upon which the Supreme Government are bound to make the most careful investigation, in order to assure themselves that they get what we are certainly paying for. It is quite true that an ill regulated system of realizing the Abkarree tax by unconditional farming of monopolies does tend to encourage drinking; but then the plan of levying a still-head duty, unless very carefully supervised, encourages smuggling; and it is doubtful which malpractice is the more beneficial to the public morality. Where the right to distil and sell liquors is farmed out by districts and sub-districts to contractors, any organized profession of smuggling ceases; the contracting monopolist looks out for his own interest, he has an array of sub-contractors who also look-out for themselves; and any interloper is detected and prosecuted rigorously, for he cannot escape the keen eyes of his own trade. If, however, the smuggling does manage here and there to survive, at any rate the loss falls on the monopolist, not on the State. But when the Government abolishes monopolies, and freely permits distillation so long as the still-head duty per gallon is paid—the effect is this, that secret stills are set up in order to evade the duty, and the Government cannot prevent them save by much vigilance and at some cost of establishment. If vigilance be not maintained, or if a sufficient preventive service be not kept up, then illicit distillation will increase, and legitimate duty-paying distillation will decrease—that is, the Abkarree revenue from the still-head duty will diminish perceptibly. Now in England the still-head duty system is exposed to little risk, because there distillation is a trade practised only by large capitalists, and to work a concealed still would be very difficult. But in India, where distilling apparatus can be set up for a few rupees, where the raw material grows wild over the jungles, and where these very jungles hide the smuggler—in such a country the effect of a high still-head duty may be very clearly perceptible in the Excise Returns. A low still duty does not check drinking at all, and combines the disadvantages of both systems.

Whether the method of farming out monopolies might not be so improved and regulated as to enable us to control and repress the indiscriminate sale of liquor and drugs, is a question upon which we cannot now enter. But one thing is plain that under the old system the Treasury gained large revenues which it has lost under the new régime—under the new régime the State risks loss of money and morals both, unless all smuggling be vigilantly and constantly put down throughout vast tracts of wild half-cultivated country. We believe that in almost every inland Province which has tried the still-head duty system, the receipts from Excise have decreased year by year from its first introduction, or, at least, have not risen as they should. If this betokens a gradual decay of the habit of using spirits and drugs, it is a great administrative triumph; but if it signifies that the people are getting their liquor from stills which escape duty, then we are living (financially) in a Fool's Paradise; the people must be drinking as much as ever, and defrauding the Treasury into the bargain. Why should not one of those energetic Under Secretaries who have recently compiled exhaustive and expensive Minutes about convicts and school children, undertake a tour of inspection and scrutiny into the various Abkarree systems now working within British India?

## THE NEW FINANCIAL RESOLUTION.

So far as this Resolution goes, it is a reform; but to speak of it as *The Financial Decentralisation Scheme* is ridiculous. The Government is not guilty of this absurdity, but lends countenance to it by a formal enunciation of the great principles of Decentralisation in the opening paragraphs of the Resolution. The mountain in labour has brought forth a mouse. The throes of the mountain are all that could be desired:

I. "The Governor-General in Council is satisfied that it is desirable to enlarge the powers and responsibility of the Governments of presidencies and provinces in respect to the public expenditure in some of the civil departments.

II. "The Supreme Government is not in a position to understand fully local requirements, nor has it the knowledge for the successful development of local resources.

III. "Existing Imperial resources will not suffice for the growing wants of the country. It is only by a judicious system of local assessment and control, that what is needed can be accomplished.

IV. "It is expedient that, as far as possible, the obligation to find the funds necessary for administrative improvements should rest upon the authority whose immediate duty it is to devise such measures."

V. "It is inexpedient that the funds so raised should be intercepted for objects, the cost of which has been hitherto defrayed from the general revenues, even though such objects be of an admittedly local character.

After the formal enunciation of such principles as these in the opening paragraphs of its Resolution, Government can hardly blame the press for dubbing its work, *The Great Decentralisation Scheme*. The truth is, a little pardonable sleight of hand has been practised upon the public. The Income Tax was doomed, and there was nothing to bring forward in its room. In this position, some one seems to have suggested to the Imperial Financiers to cut down all the minor heads of civil expenditure in the country by a lump sum of £ 350,000; and to throw upon the local Governments (1) the task of making the reduced allowances suffice, or (2) the odium of any new taxation that might be necessary for the purpose. In point of fact, the Supreme Government simply says that the local Governments must henceforward do for £4,688,711 a year, what has hitherto cost the Supreme Government £5,019,512. If they find that they cannot, they must then take upon themselves the odium of such new taxation as may be necessary to bring the consolidated imperial allowance up to the required amount. That this is a very happy kind of decentralization for the one party, is obvious. The local Governments have the same work to do for £4600,000 for which the Imperial Government took £5000,000, and if they cannot, they may then, if they please, face the odium of devising new taxes for the purpose. The Supreme Government gives up the Income Tax in deference to the popular wish, and transfers the odium of reimposing it, or some other tax in its room, from its own shoulders to those of the local Governments. The pill is gilded and with very wholesome material, but that this is the real history and meaning of the Resolution is obvious from paras 9, 10, and 11.

IX. "The income-tax of six pias in the rupee imposed for the current year was never intended to be permanent, and the Governor-General in Council has already announced a resolution not to renew the tax for next year at this high rate, unless some unforeseen contingency compels him to do so.

X. "It was thought at first that the income tax could not be reduced to the desired extent without imposing upon local resources almost as large a sum as might be given up. Anticipations made so long before the beginning of the Financial year must be uncertain; but as far as the Governor-General in Council can now judge, it will be possible next year to give substantial relief from existing taxation without the imposition of any considerable new burden.

XI. "The Government of India is necessarily placed to make over to the Governments, under certain conditions to be presently set forth, departments of the administration in which



they may be supposed to take special interest; and to grant permanently, from the Imperial revenue, for these services, the sum of £4,688,711, being less by £380,801 only than the assignments made for the same services in 1870-71."

The device which has been thrust upon to make the abandonment of the Income-tax possible, is not perhaps quite ingenious, but contains within it the principle of an important administrative reform. Henceforward the local Governments of the country will have the minor heads of their civil expenditure entirely under their own control. They may now spend as little, or as much, as they please upon Education, Sanitation, Police administration, roads, and other local Public Works, without reference to the Supreme Government, which will contribute every year the following consolidated allowances to each Government out of the Imperial treasury towards these purposes:

Ough will be allowed .....	£ 206,948	a year.
Central Provinces .....	861,263	"
Burmah .....	275,332	"
Bengal .....	1,168,592	"
North Western Provinces .....	640,792	"
Punjab .....	516,221	"
Madras .....	739,488	"
Bombay .....	880,075	"
	<u>£ 4,688,711</u>	

The Government pledges itself not to reduce these allowances, unless some fiscal misfortune, such as a heavy loss in the opium revenue, or national disaster, such as war or severe famine, occurs, and they will not, "in any case, be reduced without previous consultation with the Governments."

There will be no interference whatever with the minor Governments in their apportionment of these allowances to the purposes for which they are granted. "The assignments may be distributed at the discretion of the Governments among the several departments for which they will now be responsible, and any portion of the assignment made to any province that may be unspent at the end of the year, will not lapse to the Imperial revenue but will remain at the disposal of the local Government" (para. 18)

That this is a real and substantial reform must be frankly acknowledged, and it is cheaply bought at the price of the conditions attached to it. Lord Mayo has begun, and begun honestly, to do what his predecessors could not make up their minds to do at all. It would be absurd to magnify the sacrifice which the Supreme Government makes, but we owe full acknowledgement of the fact that it has struck the key-note of a great future reform, which it makes inevitable. The Resolution is silent upon one very important point. It is now all but universally admitted that the great works of public improvement which wait execution amongst us, are only possible by means of loans. Well, are the local Governments to be at liberty to borrow upon the credit of their local revenues? We take it for granted that they are. There will be a manifest inconsistency in casting all responsibility for local improvements, upon the local Governments, and empowering them to raise taxes for the purpose, while denying them the power of constructing these works in the only economic way open to them. Capital is so scarce in India that the wisdom of diverting it from private enterprise to public works is exceedingly doubtful. New taxes for public works do this with inevitable loss in the transfer. If the local Governments are not allowed to borrow upon the credit of the local revenues—this new Resolution will be a very doubtful reform indeed.

#### A NEW PERMANENT SETTLEMENT.

The consolidated allowances to be henceforward made to the local Governments of the country, from the Imperial treasury for local expenditure upon public improvements, education, and

sanitation, printing, civil buildings, roads, and miscellaneous public improvements, are respectively as follows:—

Ough .....	£ 206,948	annually.
Central Provinces .....	861,263	"
Burmah .....	275,332	"
Bengal .....	1,168,592	"
North West Provinces .....	640,792	"
Punjab .....	516,221	"
Madras .....	739,488	"
Bombay .....	880,075	"

In settling these allowances the Supreme Government has made the strange error—for error it plainly is—of assuming that the allowances made to each province in the estimates of the current year, may fairly be regarded as indicating the just normal claim of each province upon the treasury for the purposes in question. The error is intensified moreover by the pledge needlessly given in para. 17 of the Resolution that, "unless some fiscal misfortune such as a heavy loss in the opium revenue, or national disaster, such as war, or severe famine occurs, the Governor-General in Council will maintain, for the future, the assignments for these Provincial services at the amounts now forced."

It is necessary to place on record a protest against this pledge, which is given without consulting the public or inviting any criticism thereon. Permanent settlements of one kind or other, seem to be a rage with Calcutta officials. One would think that the unwisdom of permanently settling anything, either in revenue or expenditure, while the finances of the Empire is a chaos, would be manifest to the capacity of a child, but that we see bearded men unable to comprehend it. How can the Supreme Government give a pledge to allot £1,168,000 a year for all time to come, out of the Imperial Treasury to the purely local wants of Bengal, or of £900,000 in the same way to Bombay, when the Empire is divided in opinion as to what the just claims of each province upon the Treasury really are. The pledge ought to be instantly withdrawn or modified, as we shall shew conclusively before we have done. The assignments are partial and unjust, and as every thing unjust in this world must take the fate which God has allotted it, it is impossible that a pledge of this order should be respected by those who come after us. All these errors arise in the same way. Government will not tell the public what it purposes to do. The result is that one or two men unaided frame in the retirement of their bureaux, measures upon which the judgment of the country should be sought. What was there to prevent the publication of this Financial Resolution in the "Gazette of India" as a proposed measure only, as Acts of the Legislature are published?

Does any one believe that it would be in the least *infra dig* for the Government thus to take counsel of the public? The fellow is a fossil who thinks so, and does not belong to this age at all. We honestly believe that the world has never before seen so pure a Government as the Government of India, but in Heaven's name, let it leave all claim to infallibility to that poor old Pope who stands shivering at the portals of the Vatican, not knowing where in the wide world to take his infallibility for shelter. A State is infallible only when the people intelligently approve what is being done, from a clear understanding that it is right and just to do it. Here in India we can only make an approach to this, a very imperfect approach, but do not let us throw away, let us rather foster, what few advantages we have.

We have no doubt whatever that this Resolution has been drawn up with great care and reflection, and yet from the limited circle of its advisers, the plain and fatal error we are about to expose seems to have escaped notice altogether. Surely it requires no proof that before pledging ourselves permanently to allot a certain revenue from the Imperial taxes for the local wants of a province, we should decide what that province can justly claim therefrom; an enquiry which has not even been raised it would seem, in making these allotments.

The *Hindoo Patriot* protests that the grant to Bengal is too small, while the Bombay Journals complain that it is too large, and affirm that the population of Bombay are made to contribute three times, and Madras twice as much to the Imperial expenditure, as the people of these Provinces. The Madras Government records a formal protest against the

attempt to "permanently settle" the burdens which each province shall carry, while the finance of the Empire is simply a shams. We have taken considerable pains to ascertain with as much accuracy as possible the exact cost of the purely local civil administration of each province of the Empire. In doing so, it was necessary to deduct in each case from the accounts, all expenditure on account of Treaty Assignments, Political Agencies, Manufacture of Opium and Salt, Marine Charges, Interest on Service Funds, &c.

It would burden our article with too many figures to give these processes in detail. It must suffice that we give their results, which can be easily tested by any who may doubt their accuracy. The cost then of the purely local civil administration of the eight provinces of the Empire, and the outlay upon purely local public works therein, during the eight years 1861-69 to 1868-69, were respectively as follows:

Cost of purely local civil administration and outlay upon purely local works 1861 to 1869 inclusive:

	Civil Charges.	Local Public Works.	Total.
Bengal ...	£ 19,517,000	£ 6,681,100	£ 26,198,100
Bombay ..	" 19,544,000	" 9,511,870	" 29,055,870
Madras ...	" 16,800,000	" 6,193,000	" 22,993,000
Burmah ..	" 3,600,000	" 1,499,000	" 4,099,000
N. W. Provinces ..	" 12,257,000	" 5,305,000	" 17,562,000
Oudh ...	" 3,410,000	" 1,312,000	" 4,722,000
Central Provinces ...	" 3,600,000	" 2,288,000	" 5,788,000
Punjab ..	" 8,416,000	" 5,138,000	" 13,554,000

Now to meet this purely local outlay, the Provinces have in common, one and the same source of Revenue—the land. Burmah alone of them all supplements her land revenue by a tax peculiar to herself—the capitation tax. The land tax is, we say, the local tax of each province, all the other taxes, Customs' duties, Abkaree, Stamps, Opium revenue, &c., being strictly imperial in their nature; as in general they may be said to bear equally upon the whole country, and where they do not, ought at once to be made to do so. Let us now compare therefore this expenditure upon purely local purposes, with the proceeds of the one purely local tax

Eight years local expenditure and revenue, 1861 to 1869.

	Land Revenue	Local Expenditure.	Surplus towards Imperial Revenue.
Bengal	£ 31,302,400	£ 26,198,100	£ 5,084,300
Bombay	" 27,608,000	" 29,055,870	" 1,449,870 (deficit)
Madras	" 32,443,000	" 22,993,000	" 10,050,000
N. W. Provinces	" 32,387,000	" 17,562,000	" 15,825,000
Punjab	" 15,180,498	" 13,554,000	" 1,624,398
Oudh	" 8,134,121	" 4,722,000	" 4,012,121
Central Provinces	" 4,280,000	" 5,788,000	" 1,448,000 (deficit)
Burmah	" 4,194,522	" 4,099,000	" 95,522

Now we do not wish to magnify our work beyond its real worth, but we take the liberty to affirm that this table makes by far the most important disclosure revealed of late years in the financial discussions that have been going on in the country. We here see at a glance, the provinces upon which the burden of the imperial expenditure really falls. Of a total contribution from the purely local taxes of the Provinces of £ 26,100,000 in the last eight years, Madras, the North West Provinces and Oudh between them have furnished no less a sum than £ 20,000,000. Bombay has contributed nothing; but like the Central Provinces has been a drag upon the treasury during the period to the extent of £ 1,500,000. There is this important difference however between these two Provinces, that the £ 9,000,000 spent upon Public works in Bombay have been to a large extent spent upon the land, and that as the leases are therein just beginning to expire, the next 30 years will shew a very different account from the last ten. But let Bombay note clearly how she at present stands towards the Imperial treasury. She has a great lee way to make up, and in resettling her land for 30 years, must double and treble the present assessment.

In the Central Provinces, on the other hand, Sir Richard Temple has settled the land for 30 years to come at the proportionate rate of three or four annas per acre, and the result is that there will be a chronic deficit there to the end of the century. We confess that the figures concerning Bombay have

come upon ourselves somewhat with the force of a lightning-bolt. Let the Bombay Government and people however look the matter fully in the face. A good deal of the so-called local public works expenditure in that presidency has been of an Imperial rather than a local order, and the Bombay Government may address themselves to the proof of this with good effect, but meanwhile they had better cease talking of already constituting three times as much per head to the Imperial Treasury as the people of these provinces. It is plainly by Madras, the North West Provinces, and Oudh that the burden is now being borne, and to stereotype a state of matters like this as the new Financial Resolution proposes to do, is a monstrous injustice.

The contribution per head of population towards the Imperial treasury from the various provinces of the country during the last eight years has been as follows:

1861 to 1869.

North West Provinces, about	Ra.	5	0	0	per head.
Oudh	"	4	0	0	"
Madras	"	3	0	0	"
Bengal	"	1	4	0	"
Punjab	"	1	0	0	"
Burmah	"	0	7	0	"
Bombay	"	1	0	0	" (deficit)
Central Provinces	"	1	8	0	"

Now with this table of contributions per head of population towards the Imperial treasury in each Province before us turn to the allotment therefrom which this new Financial Resolution proposes to stereotype and make permanent:

	Contribution 1861-69.	Permanent allotment per annum
N. W. Provinces	Ra. 5 0 0 per head	3 as per head.
Oudh	" 4 0 0	" 3 " "
Madras	" 3 0 0	" 3 " "
Bengal	" 1 0 0	" 4 " "
Punjab	" 1 0 0	" 5 " "
Burmah	" 0 7 0	" 16 " "
Bombay	" 1 4 0 (deficit)	" 12 " "
Central Provinces	" 1 8 0	" 5 " "

It would almost seem as though the permanent allotment were made upon the principle of giving the most to those who contribute the least. This article will probably provoke a good deal of criticism, and the figures are we are aware open to modification. In general, however, and upon the whole, our reflections will, we are persuaded, be found to be just the more closely they are considered.

## REASSESSMENTS IN BOMBAY

### II

#### THE INDAPPOOR TALOOK

In the very first district of Western India in which the 30 years' leases have expired, the assessment upon the land has been raised 50 per cent., the increase being equally apportioned in by the landholders. And with reason; as we are about to shew in the present article, that the increase—important as it is—ought to have been, and might have been, very much more. Our object in doing so, is to fasten attention upon the principles which must govern the reassessment of the land in Western India, now that its leases are beginning to fall in. Indapoor is in many respects so exceptional a district, that if its reassessment stood alone, we should simply give hearty commendation to what has been done, and pass on. The district is probably one of the poorest in India. Its normal condition is that of drought. The rainfall during the five years—1861 to 1868—averaged but six inches a year, while from the jumamahandy reports it would appear that the cultivators "got a good crop but once in three years." Of the other two, one is a year of almost complete failure, and "one of middling crops only." With a rainfall so scanty and capricious, the district can never be anything but poor. It has no rubber crop whatever, and is a parched and barren land with scarcely a trace of vegetation, while more favoured districts are covered with waving harvests of golden grain.

The population moreover, is entirely agricultural. In these circumstances, it is manifestly wise to make the new settlement

as liberal, the assessment as low as the exigencies of the State will permit. The total area of cultivable land in the talooka is 170,078 acres. The old and new rates of assessment compare as follows:

Assessment under former leases...	Rs. 81,391
under new leases...	" 1,24,700

The very elaborate details, says the Bombay Government, by which Colonel Francis has supported his propositions

"For the revision of the rates, leave no doubt but that he has exercised a very wise discretion in not increasing the assessment further, as he might have done had he been guided solely by the recent prices of produce.

"An increase of upwards of 50 per cent. is not slight, but it is fully justified by the difference in the circumstances of the district, the increased facilities of communication, and the rise in prices, even taking the average prices much lower than those ruling in the last few years.

"The Governor in Council, therefore, confirms the proposed rates for 30 years."

Nothing is further from our intention than complaint against this decision. We are only concerned to shew, and the exigencies of the State require us to shew, that the new assessment might with safety have been pitched at a far higher rate. We do this because the leases are about to be renewed in other parts of the Presidency very differently circumstanced, with which it is absolutely necessary that less delicacy and more regard to principle, either should be shown. Colonel Francis bases the new assessment professedly upon "the revolution that has taken place in the price of grain during the currency of the lease." The staple product of the district, jowaree, was selling at 66 seers the rupee in the year in which the old leases were issued (1838). In 1865-66 the price had risen to 18 seers. We must here make room, however, for Colonel Francis's own treatment of this question of prices, as everything depends thereon:

"The following table exhibits the average yearly price in the Indrapoor market during the currency of the lease:—

Year.	Jowaree, No. of Seers per Rupee.	Jowaree, No. of Seers per Rupee.	Year.	Jowaree, No. of Seers per Rupee.	Jowaree, No. of Seers per Rupee.
1836-37	32	32	1846-47	34	43
1837-38	37	39	1847-48	41	38
1838-39	23	32	1848-49	30	67
1839-40	31	39	1849-50	30	44
1840-41	23	33	1850-51	44	64
1841-42	19	27	1851-52	40	56
1842-43	16	16	1852-53	42	68
1843-44	12	13	1853-54	44	72
1844-45	14	16	1854-55	36	60
1845-46	15	18	1855-56	25	36
1846-47	15	20	1856-57	34	56
10 years' average	26	34	10 years' average	37	56

"During the first 10 years of the lease but little change took place. Prices ranged from 32 seers in 1836-37 to 38 in 1845-46, whilst the average for this decennial period is 34. The first year in the next decennial series was a most unfavorable season, and grain rose to the rate of 43 seers the Rupee. It speedily fell again, and had gone down to 30 in 1848-49 and 1850-51. A steady increase set in from this date, and it rose to 44 in 1850-51. The average for this period is 43.

"Beginning with 39 seers in the last decennial period of the lease, but this conclusion covered during the earlier years, and down to so late as 1851-52, when the rate was 44. The general rise of prices which has ensued, throughout the Presidency since this period, the rate was 44 in 1851-52, and there has been but little change since. The average price for this period is 44.

"We must consider, however, that in estimating the effect of the new assessment, we must take into account the fact that the American war has been a most extraordinary cause of increase in the price of cotton, which has been a most extraordinary cause of increase in the price of cotton, which has been a most extraordinary cause of increase in the price of cotton."

War. The export of cotton from that country being suspended by the war, India was called upon to furnish the supply required for the English market; and she set herself vigorously to the cultivation of that product. Indrapoor is naturally not a cotton-growing district; but reports of the large profits realized from its cultivation having reached the ryots, they naturally turned their attention to its growth, and from returns obtained from the Mamistdar, I find the large area of 30,049 acres is under cotton cultivation this year. A considerable area has thus been diverted from the growth of grain during the last few years. With a diminished supply there has been increased consumption, consequent on the spread of that wealth which has been poured into the country by the large profits realized from cotton. These causes operating together have been mainly instrumental in bringing about the present high prices, which, therefore, I think it safe to consider exceptional.

In accordance with these views, Colonel Francis assumes as the basis of assessment for the next 30 years, that the average price of jowaree will be 45½ seers the rupee, the price prevailing during the ten years 1846-56.

Sir George Wingate, to whom with equal good taste and propriety the new settlement was submitted in his retirement in England, points out that if the above table of prices is attentively examined, without reference to equal decennial periods, it will be found to be capable of division into three well marked periods. Sir George Wingate's remarks are so valuable that we feel compelled to reproduce them—

"The first is a period of low stationary prices without any more marked oscillations than may be fairly ascribed to seasons of comparative abundance or scarcity. This period embraces the 14 years from 1836-37 to 1849-50, when the average price of jowaree was 34 seers per rupee, or almost the same that was obtained at the introduction of the settlement, the average price for the 5 years preceding that event having been 33 seers. The second period is of 11 years from 1850-51 to 1860-67 and is one of advancing prices, due probably to the increasing wealth of India arising from the introduction of English capital for the construction of Railways and for suppression of the mutinies, as well as from improvements effected in the internal communications of the country. The average price of jowaree during the whole 11 years of this period was 39 seers, and for the last 5 years of it 35 seers per rupee. The 3rd period extends over the last five years of Colonel Francis' table from 1861-62 to 1865-66, during which prices received another extraordinary advance, due to the increased demand for cotton, arising out of the circumstances connected with the American war. The average price of jowaree for these 5 years was 18 seers per rupee.

"The last period is of so entirely exceptional a character, and the prices then obtaining are so clearly due to temporary causes, that it would be most unsafe to take them into account in the formation of a basis for a revision of the rates of assessment intended to last for another term of 30 years. The price of cotton, upon which the price of jowaree and other agricultural products in a great degree depend, has already fallen considerably since Colonel Francis' report was written, and is likely to fall much further. This has already affected the exchanges, and will materially diminish the amount of bullion to be received by India in the present year. This effect, it may be anticipated, will be experienced to a greater extent in future years until prices recovered their normal condition, which it would not, I think, be safe to estimate at a higher figure than those obtained during the last five years of the second of the above periods, when jowaree was sold at 35 seers per rupee.

"The average price of the preceding period being 34 seers, the former indicates a rise of price equivalent to 54 per cent., which is the amount of increase upon the present rates of assessment that may fairly be imposed on taking into account the rise that has taken place in prices since the former settlement was made. This is as nearly as possible the amount of increase which the rate proposed by Colonel Francis will effect, as he states in his 158th paragraph that the increase will be 53 per cent. If there were a prospect amounting to anything like a certainty of the high prices of the American war period continuing, then a very much greater increase than this would be justifiable."

No man will lightly differ from Sir George Wingate upon a question like this, and yet it is clear to us, that both he and Colonel Francis have overlooked the fact that the prices prevailing throughout Maharashtra from the overthrow of the Peshwa (1818) down to the commencement of the last decade (1861) were abnormally low, and by no means to be regarded as normal or enduring. In momentary oversight of this fact, of which and its causes Sir George Wingate has himself written in years gone by very exhaustively he has thought it necessary to assume a return in the Deccan to a scale of prices impossible except under a counter revolution as vast as that brought about by the American war. The induction of Colonel Francis is too narrow. For a sound judgment upon the point, it was necessary to go back to a record of prices far earlier than 1836 when the causes of their heavy fall in the Deccan had been in full and cumulative operation for 30 years. Instead of basing the new assessment upon a review of the prices prevailing during the lease, Colonel Francis should have included in his



review the prices of an earlier and more normal period. Look at the following record :

Prices in Quinquennial periods.			
Jowaree.			
Normal Period	1809 to 1818	24½	Seers per Rupee.
	1814 to 1818	22	" "
	THE PEISHWA OVERTHROWN.)		
	1819 to 1828	26½	" "
Abnormal.	1824 to 1828	28	" "
	1829 to 1838	50	" "
	1838 to 1837	50	" "
	1838 to 1842	58	" "
Modern Period.	1843 to 1846	59	" "
	1846 to 1852	54	" "
	The Russian War.		
	1857 to 1862	41	" "
	1857 to 1862	34	" "
	The American War.		
	1863 to 1866	16	" "

Were there any reasonable doubt as to the explanation of this table, the causes which have regulated prices during the century, we might allow the assumption that prices may possibly fall once more to 46 seers the rupee. When we remember, however, that the causes of the rise are enduring, and that there is not the remotest prospect of any such fall, it is necessary to protest against assumptions of an order that militate so disastrously against the State. There is not, we say, the remotest prospect of prices falling very materially in Western India for a long time to come, and if, in issuing the new leases in Bombay, we are to base the assessment upon the assumption, that the prices of the last 13 years are to be rejected in favor of the abnormal rates of the previous 20 years, there will be a most ruinous and needless sacrifice of the revenue made. We agree with Sir George Wingate that all these settlements should be as liberal "as the exigencies of the State permit." Only let us take care that we do not make these "exigencies" a mere figure of speech. They are terribly real, and making themselves felt in every part of the administration. A plain manifest error has been made in this Indapoor reassessment, in assuming that it was necessary to base it upon the belief that prices might possibly fall to the level of 15 or 20 years ago. There is not the least reasonable likelihood of their doing so.

Had Colonel Francis carried his review back to earlier times instead of taking his figures from a period when the country was passing through a purely revolutionary era, he would have got the basis of a sound induction. The table we have now given, divides itself naturally into the normal, abnormal, and modern periods :—

Average price of Jowaree			
		27 Seers per Rupee	
Normal period	1809 to 1823	27	" "
Abnormal	1824 to 1837	49	" "
Modern	1837 to 1866	25	" "

The birth of the Bombay export trade, with its steady and enormous imports of bullion dates from the Russian war. Bombay is still passing through a period of revolution, the average price of jowaree at this moment being still higher than it was even in 1866. That the extreme prices which have ruled since the American war will be maintained is not likely, but that we shall see the price of jowaree 40 to 46 seers the rupee during the currency of the new leases now being issued, is unlikely in the very highest degree. It may be affirmed almost with certainty, that the utmost fall we can reasonably expect will be a return to the prices prevailing under the Peshwa's rule.

There is another consideration connected with the renewal of these leases which seems to have been altogether overlooked. Let us admit that "it has been fully established in the review of the settlement, that at the end of the first decennial period, the cultivators were not in a position to pay a higher assessment had a revision taken place at that time."

This fact is contested, but let us assume that it is not and that the assessment of Rs. 81,000 a year was the highest assessment the land could bear while the average price of jowaree was 56 seers per rupee. If we allow this fact, and Sir George Wingate contends it, it simply means that the old assessment was a near approach to the true rent of the soil; not that it was trampled in any way upon the capital of the ryot. Sir George

Wingate points to the marked extension of "cultivation and amelioration in the condition of the ryot which took place during the period"—as a clear proof that the assessment was well within the highest possible limit. Admit, however, with Colonel Francis, that the assessment absorbed the whole rental at that period, and left no room for much accumulation of capital—what follows? but that during the last 20 years of the lease in which prices have risen from an average of 57 seers to an average of 16 only, the ryot has been holding at a mere fraction of the rental! If an assessment of 80,000 Rupees a year did not impoverish him when he could get but a rupee for every 16 seers of jowaree he raised, what proportion can that assessment have borne to his returns, when for years together he has been getting a rupee for every 16 seers? The amount of the produce which the land has yielded is the same now that it was before, but while its value is three to four times which it then was, the assessment has remained the same. Now if we are to fix the assessment for long periods of time such as 30 years, it is absolutely necessary that we should have some regard in doing so to the retrospect, as well as the prospect, of these periods.

We must look at the old lease and its history, as well as at the new one, and its probabilities. In this case of Indapoor, we start with the fact that the district admittedly has been under assessed for the last 20 years to such an extent that the rental has been all but nominal—has been a mere quit rent. Surely common sense and common equity require that we remember this fact when about to fix the assessment again for another 30 years. The six last years' harvests under the old lease were sold at an average price of 18 or 19 seers per rupee; and a simple calculation will suffice to shew what this fact means. The talooka consists of about 300,000 acres, the average yield of which under jowaree would probably be 350 lbs. an acre, while the stalks (kurbee) would also be worth something.

The value of the harvest at 57 seers the rupee, would be :

Acres	lbs.	
300,000	× 350 + 114 lbs.	= Rs. 9,22,000
Value of fodder kurbee, say 1½		
Rupee per acre =		Ra. 4,60,000
Value of harvests 1835 to 1846		Ra. 13,71,000

At 18 seers the rupee, the average price of the six harvests ending in 1866, the value had risen as follows :—

Acres	lbs.	
300,000	× 350 + 36 lbs.	= Rs. 23,20,000
Value of kurbee, 4 lbs. per		
acre =		Ra. 12,00,000
		Ra. 41,20,000

As the settlement proceedings give us no statistics of the produce of the soil, we have assumed it to be 350 lbs. per acre; and adduce these estimates simply to shew how vast the accumulations of the cultivator must have been during the last years of the old lease. And yet under the new terms, he is to pay no more than Rs. 1,20,000 a year, lest we should impoverish him! But the assessment for the whole period of the lease will amount to no more than Rs. 36,00,000 :

Yearly Assessment	Years	
120,000 ×	30	= Rs. 36,00,000

Any one harvest therefore of the last ten years (for prices are now higher than ever) has sufficed to pay the entire levy of the State throughout the whole currency of the new lease. In view of these considerations, we see surely how needless it was to assume as the basis of the new assessment, a return of the price of jowaree to former rates. We are satisfied that Colonel Francis might have fixed the assessment at three times the old rates. And "the exigencies of the State" really required an assessment upon this scale. We are not at all sorry that Indapoor has been so gently treated; but we must protest against a precedent being made of this drought-stricken district, in renewing the leases of other talookas.

These considerations also affect the question which has been presented to the Government of Bombay.

The notion seems to be entertained that for equitable adjusting rents to a rise in the prices of produce, it is simply necessary to increase the rental by the percentage of the rise in prices. Thus if the price of jowares has risen from a rupee a mudd to a rupee and a half, it will be an equitable readjustment of the assessment if we increase it by one-half or 50 per cent. The principle is, we think, fallacious. Let us suppose that the same produce which formerly sold for Rs. 1,000 now sells for Rs. 2,000; the rent being in the former case 100 Rs. and in the latter Rs. 200. It is clear that in the latter case the producer has 1,800 Rs. worth of produce as margin where before he had but Rs. 900. If we suppose the cost of cultivation profit, of the cultivator, and replacement of stock to be about 2-3rd of the produce, the rent will plainly bear a higher enhancement than the mere per centage of rise in prices.

In the former case			
Value of the Produce	...	...	1,000
Deduct Assessment	...	100	
Cost of cultivation &c. 2-3rd produce,	...	600	700
Margin abandoned to the cultivator	...		<u>Rs. 234</u>
In the second case.			
Value of the produce	...	...	2,000
Deduct Assessment	...	200	
2-3rd of the Produce	...	1,332	1,532
Margin abandoned to the cultivator	...		<u>Rs. 468</u>

The Rs. 468 may be worth no more in exchange for some commodities to the cultivator now, than the Rs. 234 were formerly, but upon the whole the new margin of 468 Rs. will represent a higher purchasing power than the smaller one. In the cancellation of debt, repayment of advances, &c., it will just be twice as powerful. The new margin in the hands of the State would cancel Rs. 2 of the Indian debt for every one of the smaller margin. Were "the exigencies of the State" only a figure of speech, we should not press considerations of this order upon the department, but those exigencies are real, and necessitate our looking at these reassessments with a broad and comprehensive regard to their bearing upon the Treasury. The truth is, it is necessary to evoke another spirit in the Settlement Departments of India altogether. Their one idea now is to pet the cultivator; their true idea is embodied by Sir George Wingate with precision in the statement, that in revising these leases it is necessary "to make the new settlements as liberal as the exigencies of the State will permit." The formula expresses in the most exact manner, we think, the spirit in which these new settlements should be made. In receding from the highest possible assessment, go as far as you can, consistently with State exigencies; and stop there. A general increase of 50 per cent, only upon the present Bombay assessments will not do at all, and it is necessary to press this consideration upon the Bombay Government. The rates of all the early leases should be doubled and trebled, and they may be so with safety, and with nothing but advantage to all classes—the agriculturists themselves as well as others. For nothing is more certain than the fact that unduly low rates of rental produce careless husbandry. They will starve the Treasury, and demoralize the ryot. We have too consistently fought for the latter, to feel any fear that we shall be misunderstood in writing thus. Our appointed task seems to be always protesting against extremes. Formerly it was a grasping land policy that we had to oppose; to-day it is a needlessly indulgent one. We are now petting the cultivator, when formerly we maltreated him. In opposition to the new extreme, we point out "the exigencies of the State" and the exigencies of the land itself. Look at the vast works of improvement we are making; we are waiting for, because we are not sure where the money is to come from. It must come from the land itself. An unduly indulgent assessment is fraught with nothing but loss to the Commonwealth and to the Land itself.

We must not close our relations to this subject, however, without commending the Bombay Settlement Department upon their present policy. It is a policy of justice to the advance of the poor talook of Indapur under their care. We are in-

debited for the following table, except its mere form, to the very interesting Report of Colonel Francis:—

Indapur at the commencement and at the close of the 30 years' lease			
	1835-37	1865-66	Increase.
Ploughs	1,464	1,820	356
Carts	291	1,165	874
Buffaloes (field)	17,673	20,978	3,305
(Milch)			
(Carriage)	4,477	4,861	404
Cows and Oxen	21,345	19,454	
Sheep and Goats	36,257	47,306	11,048
Houses (Tiled)	51	560	509
Flat-roofed	4,477	4,351	
Thatched	2,207	4,375	2,168
Population. (Males)	21,129	28,436	7,306
Females	19,060	24,335	5,285

Five hundred and sixty tiled houses at the end of the leases, where at the commencement there were but fifty; debts extinguished; the people well clothed; their household utensils of copper where they were of earth; dhurrums and wells everywhere being built at private expense, and a population increased from 40,000 to 53,000. Such have been the results of this lease system in the very poorest drought-stricken district of the country. The importance of the revolution which is taking place in Western India is not yet fully understood even by the State. Years ago it was a common statement in the Mahratta country amongst the people that "the ryots could now meet the Government demands by the sale of their straw, and were not required to bring their corn into the markets at all." *Chapman's Report, 1863 upon the Malwa talook.*

The time has now arrived when in the reissue of the leases for another 30 years, this revolution must be recognized and acted upon, as far as the exigencies of the State require.

## THE NEW COINAGE ACT.

### GOLD CURRENCY.

A CORRESPONDENT who is, we believe, thoroughly master of this question, suggests to us that as there is no hope apparently of our seeing the sovereign made legal tender, "we should sink differences in points of detail, and ask for a gold currency in whatever shape Government like to grant it." If therefore he continues, "Government or the public favor a ten rupee piece of suitable weight and fineness which would be issued at a paying rate, I would give up the sovereign. A piece of 118 grains, instead of 120 grains, would about answer." Our correspondent points out that the New Coinage Act is rather a nail in the coffin of the gold currency question than any help towards it, as it solemnly re-enacts a statute which would be better out of the way altogether. The old gold-mohur and ten rupee piece of the Act of 1835, are still to be the gold coins of the country, although importers have brought no gold for coinage at these rates during 35 years, and plainly never will bring any. And yet the Currency Commission assured us four years ago, that the wish for "a gold currency was unanimous throughout the country." Was there ever a more ridiculous posture of affairs? A hundred and fifty millions of people wishing for a gold currency, and even circulating gold bars and jagots amongst themselves to supply the want of such a currency, and their Government unable to do anything but offer to coin pieces that no one wants and that no one will accept!

Some simple-minded writer in the *Times of India* said lately, that if the gold pieces of the Act of 1835 were made a legal tender, importers would send gold to the Mint. But what importers care for is that gold should pay. They care not whether the coins issued by the Mint are big or little, round or square, a legal tender or not, so long as minting their gold will bring a profit. The gold pieces of the Act of 1835 are (not by law but by the grace of Government) received in payment of Government dues, and also in exchange for notes at the currency office to the extent of one-fourth the bullion reserve, which should afford a market for two millions sterling of gold pieces in India, or a half a million in either Bombay or Calcutta. An importer could get currency notes for half a million of gold coins just as readily as for the half a million in rupees. Moreover as Government dues &c. are payable in gold, the market for gold pieces is generally unlimited; unfortunately the rate is such that not a

pieces comes into the market. But surely it is a waste of time to prove that the value of a gold mohar is not, never was, and is never likely to be, so low as fifteen rupees; unless under most exceptional circumstances, and for short periods.

We ask again, was any position in the wide world ever before so ridiculous? A whole nation and its Government wishing for a certain currency, and unable to coin pieces that will circulate! The very genius of dullness must surely have laid its hand upon a people paralyzed in so ridiculous a way! Upon full reflection we are unable to recommend with our correspondent that we should "give up the sovereign," because we see clearly as our correspondent himself also does, that the sovereign is the proper coin for us. Declare the sovereign to be legal tender for ten rupees, and stop all coinage of silver for a year or two, and the gold currency question will solve itself. That we are persuaded is the right course to take as to the gold currency so much desired. As to the paper currency of the country, the required reform is just as simple. We want a very much lower note than 10 rupees. Were we not afraid of alarming *Noodleheads*, we should say at once that what the country really wants is a *rupee* note. The dollar issues of America; the paper rouble of Russia; and the thaler note of Germany more than the one pound note of Scotland are the right model for our imitation. We have sought for years to find out what objections really lie against the issue of small notes by the State, and we have never found one that was worth two minutes' regard. Small notes issued by private persons mean simply wholesale fraud. Small notes issued by the State will be the universal currency of the future. In India where we are content to be 50 years behind the time, we have taken up the idea of a paper currency and the idea of a gold one also; but we continue to adopt in the one case an impossible note, and in the other an impossible coin.

The ten rupee note is a convenience to the upper ten thousand of the country; while it is as much out of the reach of the million as if it were 100 rupees or 1000. A rupee note, upon the engraving and preparing which some artistic skill should be spent, is what the country really wants. Such a note might be made convertible as a matter of grace at every treasury in the country; and in the course of a few years would displace almost all the silver in circulation therein. A gold currency with the sovereign made legal tender, is the proper basis for such a currency; and all that is wanted to inaugurate both these reforms is a little of that courage of which we have shown so reckless an amount in our dealings with the State rights in the soil in the Central India.

The Government of India proposes that Notes, wherever issued, shall be cashed at all currency offices possessing the rights of issue, to the extent to which such offices consider they can safely undertake to do so without interfering with their primary obligation of providing for the immediate convertibility of their own issues. Sir Richard Temple estimates that about £2,500,000 of the total circulation of the country may in this way become a sort of "universal note" currency. In addition to this concession, it is proposed to place a special sum at the disposal of the Collector in every principal district of the country, for the purpose of cashing all notes whatever that may be presented to him. He will cash every note presented till his chest runs dry, and to replenish it, he will endeavour to make his district take notes from him in exchange for cash. The intention is so public spirited in both cases that it seems ungracious to criticise such concessions. And yet there is no concealing that the State is simply in each case trenching upon a province beyond its legitimate bounds, and undertaking for the convenience of travellers and traders, the purely banking business of remittance. The notes are to be made popular in India by attaching privileges to them which do not rightly belong to such notes anywhere.

We have not much faith in such devices ourselves. What is really wanted is a note of very small denomination made legal tender and convertible at every treasury in the country, when the state of its cash business permits the conversion. Notes of high denomination are required only for effecting remittances

and ought not to be convertible in this way. If a man wants to remit Rs. 10,000 from Calcutta to Lahore, it is simply a mischievous interference with the business of the private banker for the State to undertake the remittance gratuitously. We distrust all such deviations from principle, and while we acknowledge frankly the spirit which prompts them, we do not feel at liberty to approve them. The interference of the State with the internal exchanges of the country will not improbably introduce a good deal of uncertainty and gambling into the business with very doubtful advantage to the public in the end. We trust both proposals will be carefully considered in Council before they are allowed to become law.

The question, shall there be five rupee currency notes, may we suppose be considered settled, as the Select Committee of the Council to whom the Currency Bill was referred, have reported that amongst the alterations they have made in the bill is one empowering Government to issue such notes. This is but permissive, but it is improbable that the permission will not be taken advantage of. Our own opinion is that five rupees is still too high a denomination for the lowest note. Ten Rupees was an impossible note: what the people really require is a *One Rupee Note*, as we have pointed out for some time past.

## BENGAL.

### THE PERMANENT SETTLEMENT.

We have received the following able letter upon this subject:—  
TO THE EDITOR OF THE INDIAN ECONOMIST.

SIR,—Will you allow me space for a few words regarding an article in your November number, which criticised arguments recently used by me in the columns of the *Englishman* on the subject of the Bengal Permanent Settlement, as your opinion on all economic subjects carries, and deserves to carry, so much weight, that I regard it as a matter of great importance to put the case clearly before you.

"In the first place then, I think you are wrong in supposing yourself isolated. There are no doubt among Bengal administrators, a certain number of pure Conservatives, who regard a Permanent Settlement as advantageous simply because they are accustomed to it, and a man may be found here and there who, like Sir Richard Temple, is prepared to found a Financial policy on a string of unmeaning generalities regarding progress and the development of resources; but you may rely on it that most thinking men in this province concur not only in your general economic principles, but also and even more warmly, in your denunciation of the base and brutal spirit in which the English press and the whole bagman party regard the present sufferings of the French nation.

"The point at issue between us is very easily stated. I agree with you in thinking that a system of land tenures is good or bad, according as it does or does not, secure to the peasant the fruit of his labour, and to the State an adequate revenue from its land. Landlords, as such, interest me but little. They may be at present a necessary medium between the ryot and Government; but if any practicable means could be found of enabling the working bees to have a share in the wealth at present monopolized by the drones, such a measure would find in me a warm supporter not only for its own sake, but also as affording a hope that a similar reform might some day become possible in the British Island. I agree with you, too, in thinking that the Permanent Settlement of these Provinces was a gross economic blunder, and that the political advantages supposed to be derived from it, were wholly imaginary. I am ready also to admit that if, in consequence of her peculiar land laws, Bengal contributes less than her share towards the expenditure of the Empire, she must in some way make up the deficit. On all these points we agree, and in fact the only difference between us lies in that while you are of opinion that the work of land reform can still be undone, I maintain that such a scheme is for many, if not most, parts of Bengal practically impossible. Now I think, Sir, you will admit that the only way in which we can be settled on purely economic grounds, is by

the work of a political philosopher to determine what is absolutely best, but a statesman has to consider not only what it would be desirable to do, but also the means at his disposal for doing it, and the difficulties which lie in his way. The only mode in which the question at issue can be set at rest, is by a minute and careful study of the existing under-tenures in the various parts of Bengal, and if such an enquiry should ever be made, I feel no doubt that you will be converted to my opinion that in many, if not most, districts no immediate radical change can possibly be made. In Behar, where landlords usually lease their villages for short terms of years to rickdars, whose interest and universal habit it is to screw the rents of the ryots up to the highest possible point, the change which you propose could be made without any very serious difficulties, but the case is very different in those districts where the land is overgrown with a dense mass of complicated permanent under-tenures, which must be dealt with in some way in order to enable the landlord to pay a progressively increasing amount of revenue to Government.

"To take a single instance, the small district of Chittagong in Eastern Bengal contains over 60,000 tenures held directly from Government, while the extent to which the process of subinfeudation has gone, may be to some extent estimated from the fact that during the past year 14,992 permanent under-tenures were created. Rather more than twenty years ago, a minute assessment was made of all the lands paying revenue to Government directly, but the process occupied a special Settlement Officer and a large staff of subordinates for seven years, in the course of which I believe nearly 15,000 distinct suits were instituted and decided before the special Settlement Officers. So litigious are the people, that they will spend several rupees in instituting a suit for four annas, and I have no hesitation in saying that if an enquiry into, and record of, all the existing under-tenures were undertaken, it would not be complete by the end of the century. Moreover, when completed, it would be incorrect and useless, because in the meantime large new tracts of jungle would have been reclaimed without the knowledge of the revenue authorities. Only a very slight increase of revenue could ever be hoped for, even if the impossible task of a complete enquiry were actually accomplished; and the ryots are already so prosperous and independent, that we could hardly hope to better their condition. In this, and other districts of Eastern Bengal, where such a thing as a tenant at will is not to be found, the position of the peasantry is no doubt exceptionally good. But between their condition, and that prevailing in Behar, every intermediate degree may be found, both in respect to the prosperity of the ryots, and the complicated subinfeudation of land.

"Briefly put, then my case is this. The political economist may properly conclude that a Permanent Settlement is in itself an evil, and may fairly argue that Bengal should in some way make up her fair share of contribution to the imperial revenue.

"The work of the statesman is different. Given a state of society in which a very large part of the population have right of some sort in the land, he has to decide whether it is desirable or even possible to unravel their inexplicable tangle, and whether the necessary increase of revenue cannot be secured at a less cost, with less inconvenience to the people, and with less certainty of filling the whole country with litigation and dissatisfaction by some easier, though theoretically, less perfect method.

"It is because your leading doctrine is so valuable and true, that its application to Bengal as a whole irritates thinking men, who have had an opportunity of becoming acquainted with the special facts of the case. Knowing, as we believe ourselves to do, that any attempt to apply it in this province generally will inevitably fail, we feel persuaded that the effect of such a failure would be a reaction of opinion, and a fresh loss of power for financiers of the Temple school.

I am, Sir, yours sincerely,

AN OCCASIONAL CONTRIBUTOR TO THE "ENGLISHMAN."

NOTE.—We give full weight to the facts narrated in this letter; but reserve comment thereon.—ED. I. E.

### EDITORIAL NOTES.

The Indexes of Volume I. of the *Indian Economist* and its Supplements accompany this issue. Subscribers whose copies may be imperfect should let Mr. Knight know at once, what numbers they require to complete them. We shall be greatly indebted to such of our subscribers as are in arrears, if they all will be good enough to remit to us within the month.

"Lays, for all financial purposes," says a correspondent of the *Pioneer*, "should become a Federation of Governments, self-administration a principal attribute to that of the American model." We are glad to see that our suggestion from this head

has found a lodgment in some minds. We see no good reason whatever, why we should not imitate in this country, the system of federalized finance that prevails in the States, and answers so well there. Calcutta will have to let go its hold upon the other provinces sooner or later, and the sooner the better. We might completely decentralize the administration of the finances to-morrow, with nothing but good to the country.

The *Indian Daily Examiner* says that "the public opinion of the country as regards the income tax may be inferred from the fact that not one single journal, European or Native, non-official or service, religious or secular, published within the limits of India, advocates the retention of the tax at two per cent. or even at one. Total abolition is the cry of all India! The *Friend of India* was the last organ of opinion to hold out for the retention of the impost at a reduced figure, and it gave in on last Thursday."

This is not quite correct. The *Pioneer* and the *Indian Economist* have each expressed doubt as to the wisdom of totally repealing the tax. While we do not advocate its retention, we do not feel at liberty to urge its abolition, for the reasons stated by us in a recent issue.

The Settlement Report of Mundah in the Central Provinces, lately completed by Captain H. C. E. Ward, tells us, that "under the Mahrattas, the land revenue was a comparatively small item in the income derived from the country. Everything 'imaginable was taxed.' The taxes which paid best were the *sayar* (or transit duties), the *pandore* (tax on non-agriculturists), and the tax on widow marriage, concerning which last Captain Ward tells us there appears to have been a peculiar custom in the district regarding widows, whose marriage had not been consummated. 'They were looked upon as Government property, and a price set upon them. The scale varied, I conclude, according to age and accomplishments; the highest price was 1,000 Rupees, and there was a sliding scale between that.'

Captain Ward states that, although unable to give their names, there were altogether 34 or 35 different taxes levied in the district, and that the income derived therefrom was said to be "double and treble the amount of the land revenue," although there were no official records of the collections. The Mahrattas were great adepts in the art of squeezing, but their imposts were quite impracticable by a civilized government.

THE question of Broad vs. Narrow Gauge for the future Railways of India, is now we suppose set at rest. It is admitted by all that the narrow gauge will give us for the same outlay two miles of railway for every one constructed on the broad gauge, while the cost of maintaining and working will be so much less, that the tariff of rates may be largely reduced and the railway balance sheet improved at the same time. The defenders of broad gauge entrench themselves within the four corners of the fact, that we have 6000 miles of line already built upon the costly broad gauge system. And so because we have made a manifest initial error in the construction of our first 6,000 miles of line upon a wrong system, we are to go on constructing 100,000 more upon the same system—that no break of gauge may embarrass our movement of military stores and forces, in the remote contingency of a war breaking out in India. The sapient gentlemen who urge this course upon us, cannot see that the railway system of India is only in its infancy. We had better abandon our 6,000 miles of broad gauge altogether than persist in an economic error, the loss from which will accumulate upon us in geometrical progression.

We are glad to see the *Englishman*, now once more, we believe under the conduct of its old leader, Mr. Saunders, recalling its late remarks upon, and approving the creation of, a special department of the State for the improvement of the Agriculture of the country.

"Among the subjects which may be expected to constitute the special care of the Department of Agriculture and Commerce—





II. Returns, accounts, and estimates are to be submitted to the Supreme Government in such forms, and at such times, as may be prescribed.

These conditions however, are to be understood as prescribed for the present, tentatively only, and to be subject to such revision as experience may render necessary.

THE Revenue Board of the North West Provinces, in a letter to the Local Government, dated 7th ultimo, upon the prospects and condition of the cotton crop upon the ground, observe that "It can scarcely be supposed that a crop which occupies 5 per cent, only of the whole cultivated area of the N. W. Provinces should seriously displace any edible or other crops, and that so far as any crop is displaced by cotton, it is the coarser millets and vetches which are grown in the first agricultural harvest, and consumed mainly by the poorer classes of the people." But we do not remember to have seen any complaint that cotton has displaced food in the Upper Provinces, where the cultivation of cotton has ever been of a very mild order.

When the Government of the North West thinks it necessary formally to remark on what it calls "the fallacy" of the argument commonly heard, that the increase in cotton acreage by encroaching on the area devoted for cereals has contributed to the rise in prices, it is desirable to point out that the terms "argument" and "fallacy" are misplaced. It is not an argument but a fact that the substitution of the growth of export produce for food wherever made must tend to increase the price of food. No one that we know of, has ever asserted that the price of food in the North West was appreciably affected by this cause, but if cotton really has displaced the growth of food there, then whether the encroachment has been 5 per cent. or 50, *pro tanto* the price of food will have been affected thereby. The complaint may be inapplicable to the North West because the substitution has been unimportant, but it is assuredly no fallacy to affirm that the contraction of our acreage under food by the growth of export produce in its room will raise the price of the former.

In Western India, the price of food has been more than trebled in late years by the substitution of cotton for food grains. The staple food of the people is there jowaree, and where this grain was formerly selling at 60 and 70 seers the rupee, it has averaged but 16 to 18 for many years past. This is no fallacy here assuredly, but a very striking fact; and one that the State should recognize fully. It is now twelve or thirteen years since we first pointed out what the effect of this change in Indian agriculture would be, and Mr. Green and Sir George Wingate had anticipated us by several years.

THE Punjab Tenancy Act appears to be working in the most satisfactory manner. The Administration Report for 1869-70 tell us that the tenants who lost status under the operation of the recent settlements have been very active in suing to recover their lost position; but the proprietors have been singularly apathetic, and the provisions enabling them to evict occupancy tenants on payment of compensation are most rarely put in force. In forwarding the monthly returns of tenancy cases for April 1870, the Financial Commissioner remarked:—"No excitement whatever has occurred from the introduction of the Act in any class of people connected with the land, nor do I anticipate that any excitement or difficulty will occur in working the Act."

Our readers may remember that the Act was passed in 1869 in the face of a powerful opposition both in and out of Council. The main provision of the Act, is the declaration that every cultivator entered in the records of previous settlements as having a right of occupancy, shall be presumed to have such right, unless it shall be proved by regular suit brought by the landlord that he has no such right; or that within 30 years, tenants of the same class, in the same or adjacent villages, have ordinarily been ejected at the will of the landlord.

It was asserted that our early settlements had conferred occupancy rights upon men, who were simply the

tenants at will of superior landlords whose property we had thus confiscated. In accordance with this view, the Settlement Commissioner proceeded to deprive many thousands of the ryots of the occupancy status they enjoyed under our early settlements, degrading them to the position of mere tenants at will under the new one. Now these men, we are told, have been "very active in suing to recover their lost position;" while the so-called landlords are "singularly apathetic" in availing themselves of the provisions of the Act in their favor. The conclusion is irresistible. The early settlements were more just, more in accordance with the convictions of the people, than the new one.

THE area under cotton in the North West Provinces, and the estimated produce of the current year, compared with the area and yield of 1869-70, is as follows.

	1869-70.		1870-71.	
	Acrea.	Maunds.	Acrea.	Maunds.
Meerut .....	211,465	144,860	239,390	319,713
Kumaon .....	241	205	278	240
Rohilkhand .....	172,767	71,854	171,743	114,257
Agre .....	355,068	124,201	387,821	382,380
Jhansi .....	76,916	8,887	94,124	32,506
Allahabad .....	317,559	92,391	328,448	185,484
Benares .....	23,046	9,304	25,130	11,071
Ajmere .....	8,898	5,981	2,553	5,109
Total...	1,165,951	464,461	1,247,484	1,050,66

The average yield per acre in 1869-70 was 16 seers, the estimate for the present year is 84.

The maund is 82 lbs., and 1,050,660 maunds represent therefore about 200,000 bales of 400 lbs. each. The area now under cotton in the Central Provinces and Berars compares according to Mr. Rivett-Carnac's Report with the cultivation of the previous two years as follows.

	1868-69	1869-70	1870-71
Central Provinces .....	Acres 750,875	824,027	788,781
East Berar .....	622,516	648,177	687,019
West Berar .....	664,226	767,609	802,417
Acres ..	2,037,617	2,239,813	2,258,208

There are thus 18,550 acres more under cultivation with cotton this year in these provinces than in the last two years. Mr Rivett-Carnac believes that "if no unforeseen calamity occurs the yield is likely to be excellent." We may therefore at present count upon an export of 250,000 bales from these provinces. We have no estimates as yet of the area under cultivation either in Bombay, Sind, the Punjab or Madras.

Upon the general question of extending the growth of cotton in India the *Delhi Gazette* says:

"The first thought for an Indian statesman is this. the people must be fed. Famine after famine has of late years visited this country, desolating and depopulating whole districts. Against the recurrence of such calamities it is the first duty of the statesman to guard. A certain area in every part of India must be left for the production of grain crops. The people cannot fill their stomachs with opium or cotton. We find by experience that the facilities of communication are not yet far enough advanced to enable a famine-stricken district to supply itself suddenly from regions more favored."

It is announced that the following quantities of opium will be brought forward for sale during the present year.

Dates.	Behar. Cheats.	Benares Cheats.	Total Cheats.
February 1871 .....	2,665	1,665	4,330
March .....	2,665	1,665	4,330
April .....	2,665	1,665	4,330
May .....	2,665	1,665	4,330
June .....	2,665	1,665	4,330
July .....	2,665	1,665	4,330
August .....	2,665	1,665	4,330
September .....	2,665	1,665	4,330
October .....	2,665	1,665	4,330
November .....	2,665	1,665	4,330
December .....	2,665	1,665	4,330
Total...	29,315	18,815	47,630

The result of the opium sale held on the 4th instant was a follows :

	Cheats.	Highest.	Lowest.	Average.	Proceeds.
Behar.....	2,685	1,160	1,145	1,151-3-4	30,91,005
Benares.....	1,685	1,140	1,135	1,132-7-9	19,08,920

The *Englishman* notices that "last year the price fell from Rs. 1,181 in December 1889 to Rs. 1,116 in January, whereas the fall this year has been only from Rs. 1,179 to Rs. 1,151." Our contemporary is quoting the Patna drug only, and overlooks that Benares opium rose last year from Rs. 1,048 in December to Rs. 1,072 in January, whereas this year it has followed the course of Patna, and fallen from 1,141 to 1,135. It is impossible to base any criticism upon fluctuations of the market so trifling, and when the *Englishman* says that the last sales show "that prices are not only higher but steadier now," than they were last year, it is trifling with its readers. The criticism would not be worth notice, but that it is made the ground of a reflection upon Sir Richard Temple.

We trust, says our contemporary, that "Sir Richard Temple will now admit that his Budget estimate of the price of opium was a serious blunder, rather than a prudent precaution, and that he will show more statesmanship and courage in March next, when he again has to deal with the question."

This is pure carping and not criticism at all. Sir Richard Temple shewed discretion in making his estimates low, in view of the tenor of all advices from China at the time. The persistent hostility with which Sir Richard Temple is being followed is, we think, very unworthy. Is the Finance Minister expected to prophecy, as well as finance for the year? No man could have foreseen the course which the opium market has fortunately taken. Does our contemporary not see that we destroy the force of even discriminating criticism, when we find fault with, and carp at every thing that is done by official men? The *Englishman* complained the other day, and justly, of "the drivelling" of the Bombay papers upon the new Financial Resolution. Is not its own criticism under review of the same order? Let us have as much honest criticism as you please; but no carping.

THE argument, says a liberal contemporary, "that it is desirable to retain as a permanent institution, a moderate Income-tax, in order that we might have a machinery in readiness for increasing our income in a time of war or great emergency, is almost too absurd for serious refutation. A one per cent. Income-tax would barely bring into the treasury a clear half-million; and it is a question for our statesmen to consider, whether it is worth while to keep up a permanent source of irritation in the country for so paltry a sum as £500,000. As for raising the Income-tax in time of war, that is simply impossible. In a time of war it is of the first importance that we should have peace and tranquillity at home; and no sane statesman would venture, after the experience of the past year, to add to external danger the internal discontent which is the inevitable attendant of all attempts to increase the pressure of direct taxation."

Now if this were true, it would be unwise to retain the tax. But it is not true. A one per cent. income tax upon the really wealthy, is open to very little objection indeed. There is the broad undeniable fact, that owing to the happy accident of the State possessing a property in the soil, and the tribute we levy upon China by an export duty upon opium, we are able to dispense with taxation altogether, or nearly so. The poor pay, however, in common with the rich, one tax which while quite inappreciable by the latter, is really felt by the former. It is the masses who pay the salt tax; the masses who make it pay; and the masses only who feel it. To the wealthy, the tax is really no tax at all. In these circumstances, a light income tax upon the latter, has very little to be said against it. The objections which lie against the machinery of the tax, are incident only to the attempt to make it a general tax. Confine its incidence to the wealthy, and extortion will become impossible.

In time of war, its pressure should be increased, but not its area of incidence. A ten or twenty per cent. income tax in emergencies, would be justifiable. Had the Baboos of Bengal, the Sowcar class, and the class of traders generally in the country,

been required to pay a ten per cent. income tax during the mutiny, there would have been no sound objection to such a tax at all. In emergencies, a common instinct teaches us that it is to the wealthy men of the community, they who have so much more to lose than others, that we must look for sacrifices to meet common disaster. Now there is no way of reaching the wealthy classes in India so unobjectionable, in such a case as we have supposed, as this income tax machinery would furnish. We should have ready a complete list of the class everywhere, and in real emergencies could put the power on more effectually, and less oppressively, through this machinery than in any other way we could devise. The wealthy classes of India enjoy a happy exemption from taxation altogether in times of quiet and peace, but should be taught that a forced contribution upon them in times of emergency involves neither hardship nor injustice. The probability is we may not require to make it once in a generation of years; but let the wealthy understand that there will be neither hardship nor wrong, in case of emergency, in their finding the tax raised to the extent of the State's necessity. Exempt all but the wealthy, once for all. The poor pay the salt tax; make the rich pay the income-tax, and call it the pepper tax if you will.

A WRITER in the *Calcutta Review* some years ago attacking the justice of the creation of occupancy rights in the country, wrote to the following effect:—

"The abstract arguments in favour of occupancy rights are strong and unanswerable. But they do not bear the test of facts. Look at the North-Western Provinces, where the policy has had full play of thirty years; has it had the effect predicted? Can any one tell me that the *mouroossee* tenant is better fed, better housed, better clothed, owns better and more bullocks—is, in general terms, better off than the tenant-at-will."

Mr. C. A. Elliott, at present Officiating Secretary to the Government of the North-West Provinces, tells us in one of his Settlement Reports, that the challenge thus given took firm hold of his mind, and that he frequently tried to get a satisfactory answer to it, but without success. At last an opportunity came of answering the appeal. He was engaged in settlement operations in 20 selected villages, and while the investigations which he details were going on, he extended this enquiry to this very point:—

"I had a census taken in each village of the number of carts, bullocks, cows, buffaloes and horses owned by each cultivator and of the number of men who were English, or wore native cloth. The table which follows gives the total of the twenty comparing all the *mouroossee*, as a class with all the *ghair mouroossee* :—

Class of Cultivators.	No. of Cultivators.	Bullocks.	Cows.	Buffaloes.	Horses.	Carts.	Average No. of bullocks per man.	No. of cultivators wearing.	
								English cloth.	Native cloth.
Mouroossee .....	523	1,315	230	333	26	48	2.5	74	246
Ghair Mouroossee.....	219	280	20	33	7	9	2.63	4	215

"This return shows the superiority of the *mouroossee* in all kinds of worldly wealth in a very striking way. In the matter of wearing English clothes, indeed, there is not much to be said, as few of either class wear them; but in all the points that count, the prosperous agriculturist the protected tenant is 50 per cent. better off than the tenant-at-will."

Mr. Elliott is justified in adding:—"If these facts had been generally known, it will hardly be possible in future for any one to declare that theories of political economy are false, that they bear on the advantage of the tenant of the present, are—look very well on paper, but do not bear the test of actual experiment. Here, as with all other classes, the right of the tenant is shown with the right of the State."

From the discovery of the deficit in 1869 in Sir Richard Temple's absence, and just before Mr. Ellis went to England, the Viceroy in Council recommended, we believe, to the Secretary of State that four Native Cavalry and sixteen Native Infantry regiments should be broken up. The Home Government replied in January 1870, expressing preference, we are told, for the reduction of the numerical strength of corps rather than the disbandment of entire regiments, at the same time assenting (if the course was deemed imperative) to the breaking up of four regiments of Native Cavalry, two in Bengal, one in Madras, and one in Bombay, and two regiments of Native Infantry in each Presidency, dispensing, in fact, with 1,800 cavalry soldiers and 4,805 infantry. The Government of India recommended finally, it is said, the following reductions:—In the Bengal Army, one cavalry and two infantry regiments; in Madras, one cavalry and four infantry regiments; in Bombay, one cavalry and two infantry regiments—a total of three cavalry and eight infantry regiments. In addition to this, it proposed that the remaining six regiments of Bombay cavalry should be reduced to the strength of the Bengal regiments, and the remaining Madras infantry regiments reduced from 640 to 600 sepoys each.

The *Globe*, which is understood to be inspired by Sir Stafford Northcote, commenting upon these statements, disparages the attempt to save 200,000*l.* a year—an item, it says, which will sink into insignificance beside the "gigantic accounts" of the Indian Budget. It estimates, according to the "Overland Mail" the annual cost of a native cavalry regiment at 28,000*l.* and one of infantry at 14,000*l.*—the total saving 178,003*l.* per annum. In the next place, forty men struck off from each of the fifty-two Madras native infantry regiments, or 2,080 men in all, each man costing fourteen shillings a month, or eight guineas a year, will give the total saving by this reduction as 17,472*l.* Reckoning the few men who are to be taken from each of the six Bombay native cavalry regiments, this second economy is put at 20,000*l.* and the whole in round numbers is thus 200,000*l.* per annum. The *Globe* speaks strongly of the folly of this, and adheres to the plan of reducing the native army to 80,000 men, so as to make five *corps d'armees* of 16,000 men each. The *Overland Mail* affirms that the *Globe* is very much out in its estimates. Soldiers at eight guineas a year are not often found.

A local contemporary, the *Indian Daily Examiner*, on the other hand, tells us that nothing final has been arrived at upon the subject; "and that whether the native army shall or shall not undergo these changes is still, as regards at least one of the presidencies, an unsettled question. The numerical strength of that army is held, we are assured, in high quarters to be rather below than in excess of the figure at which it should stand." In spite of this assurance, and the general accuracy of Mr. O'Sullivan's writing, we are disposed to believe that the *Home-guard Mail* is well informed upon the subject, and that the next budget statement will announce considerable reductions in the military expenditure of the country.

The Madras Government writes with admirable temper upon the new Financial Resolution as follows:

"In constituting several heads of expenditure as provincial services, and in transferring the management of these services to the discretion of the subordinate Governments, the Government of India has, in some measure, responded to a desire long entertained by the Madras Government, and has afforded to the local Government additional motives for that economy which His Excellency in Council trusts has in recent years been steadily kept in view by the Government of this Presidency, as well as a more definite responsibility for the efficiency of the important Departments included in the arrangement. The Madras Government will gladly accept the functions and powers now granted to them, and they will cordially endeavour to carry out, to the best of their ability, the views of the Government of India. While however acknowledging the liberal tendency of the measure adopted by the Government of India, the Governor in Council cannot abstain from expressing his regret that the Government in Council has not deemed it right to enlarge the circle of provincial services embracing in it other heads of expenditure affecting Departments which appear to possess as large a share of local interest as those contemplated in the Resolution of the Government of India, and in regard to which the concentration of large powers to the local Governments would, in the

opinion of the Madras Government, be equally advantageous. His Excellency in Council trusts that the successful working of the present measure will induce the Government of India to sanction larger concessions at no distant date. I am to add (says the Chief Secretary) that in justice to the people of Madras, His Excellency in Council is under the necessity of respectfully submitting that the amount of the Imperial Revenue allotted for expenditure in this Presidency is, under several heads, disproportionately below the amounts appropriated to at least one other province of India, if the population, area and revenue of Madras are equitably considered. The Madras Government are unable, therefore, to regard the appropriations now made under the head of provincial services, as a maximum grant, and they reserve to themselves the right of urging on a future occasion their claim to what they conceive to be a more just and equal share in the re-partition of the Imperial Revenues."

The protest as we have elsewhere shown, is most just, and the Madras Government owes it to the people whom it rules, to prosecute the claim for a revision of the grants. In their present form they are inadmissible and impossible.

## CONDITION OF THE COUNTRY.

### BENGAL

From H. S. BEADON, Esq.,

Officiating Under-Secretary to the Government of Bengal.

To R. KNIGHT, Esq.,

Fort William, the 21st December 1870.

In continuation of my letter No. 4537, dated 22nd ultimo, I am directed to communicate the latest information received by Government regarding the state and prospects of the crops in the several districts of the Orissa division, and to state that the returns of the present districts of Bengal contain nothing calling for special comment.

*Orissa Division.*—The bravest prospects in Balasore and Cuttack continue good and call for no further anxiety.

*Pooree.*—On the 27th November the Collector reported that the crops were every where much improved, and that in Pooree Purgunnah an average yield of 9-16thas or 10-16ths was anticipated, and that the grain produce would be equal to the estimated district consumption. Again, on the 6th instant the Collector reported that the rice crops showed still further indications of improvement and that the harvest generally, both in Pooree and Khoordah would yield fully 10-16th though he had personally inspected 5 or 6 villages where little or no grain would be reaped.

The Commissioner himself has very recently travelled over a considerable portion of Khoordah and made very close and careful enquiry, the results of which are shortly that in many villages where the rain came too late, nearly the whole crop, and the entire means of subsistence for the population is gone. In other places where the Commissioner had seen the rice plants stunted and nearly dried up in October and recovery appeared almost impossible, the ear has formed and the yield will be heavier and better than the size of the plants would indicate. On low land<sup>s</sup> the crops are heavy and full, generally the improvement has been extraordinary and the people have recovered confidence. The Commissioner is now satisfied that the supply of food in Khoordah will suffice. The country will, however, require careful watching as the people have not yet recovered, from the effect of the late famine; there are no reserves of grain in hand, and the crops for some years past have been indifferent.

Reports from the Bankee estate show that the crops are very unequal, in some places an average crops has been gathered, while in adjoining villages the main rice crops has completely failed and the fields have been resown with Kulhi and Kalai which again suffered from the late rain, which, though favourable for rice, was destructive to the rubber crops.

Certain works of village improvement are about to be undertaken in order to provide labor for such as may seek for it. The prices of rice and wheat prevailing in each district of the several divisions of the Lower Provinces of Bengal for the week ending the 12th instant are annexed.



## TRADE BETWEEN ASSAM, THIBET, AND WESTERN CHINA.

By COLONEL HOPKINSON.

I think it by no means improbable that the practicability of a communication between Western China and Assam will be some day established. Such a probability has indeed been assumed from the fact only of the proximity of the north-eastern corner of Assam, on the left bank of the Brahmapootra (so far as the mere distance in miles measured on the map goes), to Yunnan, in China, and supposes that the mountainous region which intervenes may not be found on close examination so impracticable as all inquiry, and, indeed, experience, has hitherto led us to believe it to be. Mr. R. D. Mangles, in some observations on this point, certainly speculates "on a tract not known, at least, to present any special difficulties," but all the routes that have been explored or inquired into, as those by Wilcox, Burnett, Hannay, White, and, if I mistake not, Bayfield, appear to be crowded with every species of obstruction that can be imagined, to impede and prevent commercial intercourse.

If we accept the importance which has been insisted on, of so directing the course of any exploration that it should keep clear of tribes dependent directly or indirectly on the Burmese government, we must at the same time adhere strongly to the opinion that no practicable route is likely to be found, except through Burmese territory, and one, moreover, that will not bring the explorers among tribes very directly under the influence of the Burmese government.

Lieut. Wilcox's adventurous journey illustrates the difficulties of any line passing through the Burmese tribes, and these were met with, not because he started from Suddya to Beesa, and thence to Mouraing, but because he attempted to proceed east, and then north-east, after leaving Suddya, and he had hardly quitted Assam than he found himself in the region of perpetual snow. On a clear day, snowy ranges can be seen from Suddya bounding the whole horizon from north to south-east. My idea of this region is, that it is filled by the convolutions of a mighty knot, uniting vast mountain ranges which radiate from it in every direction, and amid the intricacies of which I should despair of finding a way either in or out.

There is no doubt that it was by the pass that derives its name from the Patkoe hill, over which it leads, that Assam was originally invaded, and as every successive wave of conquest or immigration has followed the same channel, I think it may be inferred that the Patkoe pass is, in fact, the only route that presents any facilities for transit.

The journey from the foot of the Patkoe mountain to Kookong or Mangkhwon may be accomplished in seven marches, of which only one, the first, is said to be long and difficult; and between Mangkhwon and Moganny there are said to be only eight marches, through a very fine and thickly inhabited country; and again, from Moganny to Santa Fou, in Yunnan, there is a direct road.

From what I know of the relations subsisting between the various tribes of Singphos and Kamptees, I think the supposition a mistaken one that has been made by some explorers. Mr. Goodenough for instance, that the influence of the Singphos on our side over those in the Hookeong valley can be other than extremely limited, possibly—even probably—the fact may be that it is altogether non-existent.

I believe, however, that, on the other hand the power of the court of Ava, in the valley of Hookeong, and the parts adjacent, has been greatly underrated. I have seen a report concerning the detention of one of our chiefs in the Hookeong valley, which goes to show that there is at this time a Burmese governor, called the Woonpoong Monng-tha, acting as governor of Mangkhwon, and that the Singphos of Hookeong are wont to look at the Burmese government at Mandalay for protection against the arbitrary conduct of their own chiefs.

I should doubt whether any exploring party engaged up to lat. 27° or even further north, could prosecute their object without the unreserved and cordial assistance of the Burmese government.

I should be sorry to be thought to express myself dogmatically against the practicability of establishing trade communication between China and Assam, through the tract under consideration, for the information we have about it is too small to warrant a positive opinion one way or the other, but even going no further than the map tells us of the position of the Irrawady, I cannot understand how any land route, which comes within any distance so near it as to be put into competition with it, should be preferred to it, nor what could be the description of merchandise that it would be more profitable to seek an outlet for at Calcutta via Assam, than at Rangoon via Bhamo. If Rangoon were still in the hands of the Burmese, the case might be different, but now that Lower Burma has become a British possession, to attempt to divert the course of any trade which, left to itself, would naturally seek the Irrawady, or any trade which on the whole, could be more economically conducted by the way of the Irrawady, appears to me to be futile and impracticable.

One reason that forbids me from indulging in the hope of seeing commercial intercourse established between China and

Assam, through northern Burma or the Shan States beyond, is, that no native trade at present exists, even in the humblest and most insignificant form, between the two countries. Now native trade, though usually wanting expansion beyond the most moderate dimensions, is often audacious in its enterprise, and penetrating in the extreme; it may flow by minute and scarcely perceptible channels, yet still it will find its way through every crevice, and ooze out at the most unexpected and inaccessible places, and its absence in this case appears to me peculiarly significant. The Shans, the Burmese, and the Chinese are all three hard traders; how is it then that they have not found their way to Assam by some route? Debpraghar is known, at least by name, to thousands and tens of thousands of Khamptees and Singphos; they know that they can obtain there piece-goods of any description and in any quantity; and that their ponies, their cinnamon, or their leaf-gold would be taken as readily in exchange there as at Rangoon or Moulmein. How is it, then, that they do not come?

Though I am not so sanguine as some persons, the main idea of opening a communication with China may, I think, very possibly be realised on the north or right bank of the Brahmapootra, and by one or other of the passes leading into Thibet. I would in particular invite attention to the route from Towang through the Kooresapara Doar, which does not, in any part, enter the territories of the Deb and Dhurne Rajahs of Bhootan, but lies entirely across a tract of country dependent upon Lassa, and forms an integral portion of Thibet, so that, as was most happily observed by Pemberton, "we have literally the Chinese and British frontiers in immediate contact with each other at a Doar in the valley of Assam, not more than fifteen miles from the northern bank of the Brahmapootra."

Sixty years ago the trade between Thibet and Assam by this route was estimated to amount to two lacs of rupees per annum, and this though Assam was then in a most unsettled state; and up to the time just prior to the Burmese invasion, the Lassa merchants brought down gold to the value of 70,000 rupees. The occupation of the country by the Burmese, however, killed the trade; and in 1833, only two Thibetan merchants are said to have come down; but since that period there has been a gradual revival of it, which even our late quarrel with Bhootan did not interrupt, and it has now every appearance of being flourishing and on the increase.

The trade is carried on principally through the instrumentality of a fair, held at a place called Oodalgooree, situated at the mouth of the Kooresapara pass. I visited the fair in 1867, and again this year, and was much interested by what I saw of the Thibetan traders. I found men among them from all parts of Thibet, from Lassa, and from places east, and west, and even north of it; some of them looked like Chinamen, they wore Chinese dresses, ate with chop-sticks, and had about them various articles of Chinese manufacture, as pipes, strike-a-lights, and embroidered purses, such as I have seen in use among the Chinese at Rangoon and Moulmein. They were accompanied, in some cases, by their families, and carried their goods on sturdy ponies, of which they had a great number, I should think, some hundreds. Besides the Thibetans who attend this fair, there are some who still take the alternative route through Bhootan via Tamgong to Hewangiri.

The want of competent interpreters prevented him from seeking information from these merchants, about the road by which they travelled. I have no doubt that it is beset with great difficulties, and if it be alleged that they are greater than would be encountered on the route via the Patkoe pass, I am in no position to dispute the assertion. At the same time, there is no getting over the fact that, a trade between Assam and China being the object in view, we have it actually made to our hand, on the one side, and only wanting such extension and development as we have a right to suppose we could give it; while, on the other, not the faintest trace of any commercial intercourse between the two countries exists, and we are absolutely without any data whatever for the presumption that we could call it into existence. So much evidence, also, in favour of the practicability of the Towang route, at any rate exists, as may be derived from the circumstance of women, and children, and laden ponies coming down to Assam by it. I may add that I noticed particularly the good condition of the ponies, and that there were few—indeed I do not remember seeing any—score backs among them. On the occasion, too, of the difficulty which arose between us and the Thibetan authorities in 1852, about the Ching Rajah, Tartar troops were pushed towards our frontiers by this pass, and the demonstration was considered so formidable, that we put a body of 400 troops with artillery in camp at Oodalgooree to meet them.

If the Thibetans can come to us, surely we can go to them. Indeed, in Assam it has never been supposed that there was any real obstacle to intercourse between the two countries, save the various restrictions imposed by Chinese and Burmese authorities. In a brief notice which I read in the *Standard* last November, of a memorandum by Capt. Montgomery, of the Trigonometrical Survey, it is stated that the Thibetans were in the

habit of resorting to Tawang for rice. Now it happens that this is the principal commodity exported from Assam to Tawang, and so, therefore, the Tibetans would seem to be dependent on us for food, in which case it is possible that we might be able to exert a certain pressure, to induce them to reciprocate the freedom of trade which we allow them. Our relations with China are also very different from what they were 20 or 30 years ago, and a receipt might now, perhaps, be obtained from the Chinese government, requiring the Tibetan and Tawang authorities to assist us. In a political point of view, I should suppose that the opening of communications between China and Assam, via Tibet, would be more valuable than that by North-east Burmah and Yunnan, while its scientific interest must be held to preponderate beyond all comparison. The identification of the Sampoo river with the Bramapootra, which is still matter of conjecture, would of itself amply reward the exertions of any expedition which should succeed in establishing it.

## PUBLIC WORKS—IRRIGATION.

### THE COST OF FLOODS IN ORISSA.

We lately described the efforts that have been made to break through that isolation which renders a failure of the crops equivalent to famine in Orissa. During the past four years more has been done to open up the Cuttack sea-board than during the past four centuries. But in spite of the increased facilities for throwing food in the country, Orissa continues liable to the most terrible scarcities. Importation cannot avert, although it may mitigate, famine. Even the partial alleviation it affords can be effected only at a great public expense, and at the cost of the total disorganisation of the province. The most nervous Lieutenant-Governor will long hesitate before he ventures, by means of a lavish unproductive outlay, to usurp the functions of private enterprise, and to subvert the natural action of supply and demand. As a means of preventing famine, therefore, ports and harbours are useless; they do not begin to operate till the evil is done; and for a real preventive we must turn to the other proposal of the Commission of 1867—irrigation.

Now the first thing that strikes one is that, in reality, there is no lack of water in Orissa. The local rain-fall, although small compared with that in Eastern Bengal, amounts to 66 inches per annum—a high average when contrasted with Upper India or the Madras coast. But Orissa is by no means dependent upon its local rain-fall. It forms a delta, through which five noble rivers pour the accumulated drainage of sixty-three thousand square miles of the interior ranges and table lands. During the time of flood, these channels dash down two and three quarters millions of cubic feet of water per second upon Orissa. The Mahanadi, literally and truly the Great River, alone has a minimum discharge one-third greater than the highest flood known on the Ganges. In the rains the floods rush furiously down upon the province, sweeping across the rice fields, uprooting stately groves, tearing away the pleasant homesteads, drowning hundreds of square miles of fertile country, and thrusting hundreds of thousands of villagers out of house and home. For the truth of each clause in this sentence, we shall presently produce irrefragable proof. Before the cold weather is over, this vast store of water has drained off, unused and unharnessed, to the sea. The rivers dwindle to narrow streams, and by the middle of May, in place of the two million and three-quarters of cubic feet that deluge the delta in time of flood during the rains, the total discharge of the Orissa river system only amounts to 1,690 cubic feet per second. The least irregularity in the local rain-fall occasions a panic, and any serious deficiency ends in famine.

It is not, therefore, from a scarcity of water that Orissa suffers, but from the want of a proper control of the water-supply. Under native rule, efforts have from time immemorial been made to regulate the rivers by means of embankments. Such efforts, however, were neither sufficiently scientific nor sufficiently complete, to ensure success. They secured certain parts of the country, but only at the expense of other parts of it: and the water, which was kept from overflowing on the protected tracts, poured its accumulated flood upon the defenceless ones. In Cuttack division we found, in 1863, when we took over the country from the Maharattas, 1,006 miles of such embankments. Of this, nearly one-half has since been abandoned, and we have vainly struggled, by tinkering at the remaining ones, and extending them, to protect the territory thus encircled. Orissa on a quarter of a million sterling has been brought to the year 1865. For every year the embankments have been less able to control the rivers in spite of a constantly increasing cost. The expenditure during the last sixteen years, of which we have returns, alone exceeds £95,000,

or almost as much as the total outlay during the preceding half century. Yet so ineffectual had this expenditure been, that during the fifty years from 1816 to 1866, the Government remissions of the land tax on account of floods exceeded a quarter of a million sterling. In spite of this vast and costly superabundance of water, Orissa had been, subject to repeated famines on account of drought, and another quarter of a million sterling has been remitted from the Government land tax, on account of such scarcities, between 1831-32 and 1866-67. Adding together, therefore, the expense of maintaining the embankments, and the remissions of revenue which the inefficiency of the embankments necessitates, we have a total of £729,132 as the cost of the uncontrolled rivers of Orissa during a little over half a century. This sum is equal to the whole average land tax of the province for five years, and it is not too much to say that every rupee of it has simply been wasted in temporary make-shifts, and that Orissa was worse off in 1866, the last year to which our figures apply, than in 1803, when we took possession of it.

But even this vast waste of public money, amounting to an annual charge of ten per cent. on the land tax of Orissa, does not by any means represent the costliness of the uncontrolled water supply of that unhappy province. Every ten years many hundred thousand pounds worth of property are swept away by the furious rivers. In 1866, the floods burst through the embankments in 478 places; they submerged 1,049 square miles of country; a million and a quarter of people were suddenly driven out of their homes, and found themselves in the midst of a vast boiling ocean aggregating more than a thousand square miles. This sea varied from 3 to 15 feet in depth, and covered the earth for a period of from 3 to 60 days. One Fiscal Division, indeed, lay buried beneath the vast accumulation of water, nowhere less than a month, and in some parts for as long as 70 days. Close upon eleven million hundred weights of rice were destroyed, at the very moment when every hundred weight of rice was life or death to some miserable peasant. It was at the end of the famine of 1865-66, and at the rates which then ruled in Cuttack town, the money value of the rice destroyed exceeded three million pounds sterling. These were the losses of a single year, and although the flood of 1866 continued longer, and was therefore more destructive, that of 1865 was deeper. When at length it subsided, and the ruined peasantry crawled back to their villages, they found their once trim homesteads buried in filthy slime, the thatch roofs torn off, and the crops, upon which their life or death depended, turned into a pestilential swamp of rotting rice-stems. Great as the pecuniary loss caused by such a flood may be, no sum of money can represent the damage which the liability to such inundations does to a province. It discourages any attempt to accumulate capital or to improve the land. A single night may sweep away the accumulations and the improvements of a life time. In short, it takes the heart out of the peasantry, and neither landlord nor tenant will spend a rupee upon doing anything for a province in which the returns are so uncertain.

Is there no cure for this state of things? For fifty years we have been spending ten per cent. of the land revenue of Orissa in vain attempts to control the rivers. There is a superabundance of water, yet during thirty-five years we have had to remit over a quarter of a million sterling in consequence of droughts; and in one year witnessed a million of our fellow-creatures starved to death by a drought-caused famine. We have spent close on a quarter of a million sterling in trying to regulate the rivers, and yet we have had to remit more than another quarter of a million in consequence of the havoc they have made. And the worst feature of it is that, in spite of all our efforts, Orissa is still at the mercy of the rivers. Next year, so far as the embankments are concerned, we may have another flood which, like the one four years ago, will turn a thousand miles of rice fields into a desolate swamp. Indeed the people live in such constant preparation for calamity, that 55,087 acres are permanently left uncultivated for fear of flood, paying no revenue to the Government, and yielding no crop to the husbandman.

The public should never for a moment forget that as long as this state of things continues, Orissa will constantly remain on the very verge of famine. All that the Bengal Government has done—to open up its sea-boards—can at best only very partially mitigate the horrors of the calamities, in which the uncontrolled state of the rivers may any year involve the province. With plenty of water, Orissa is never beyond danger of the most terrible droughts, and although subject to droughts, it is at the same moment at the mercy of havoc-spreading floods. Nature is not to blame. She has abundantly bestowed her gifts upon the province—good soil, health-giving sea breezes, an adequate rain-fall, and noble rivers; what more can a country ask? But so long as man fails to utilise and control the vast stores of water which the rivers bring down, Orissa will continue subject to the most appalling calamities. It is this office of controlling the water-supply which the canals now in progress undertook to perform, and we shall, hereafter, briefly examine how far Government has rendered them capable of discharging their functions during the four years which have elapsed since the last great famine.—*Pioneer*.

## PUBLIC WORKS—RAILWAYS.

## THE NARROW GAUGE FOR RAILWAYS IN INDIA.

REPORT BY COLONEL SPRAGUE, COLONEL DICKENS,  
AND MR. A. M. REMSEL.

To the Under-Secretary of State for India.

London, 26th September 1870.

Sir,—We, the under-signed members of the committee, nominated by the Secretary of State for India in Council (vide letter dated 27th June 1870) to consider the precise gauge and general character suitable for an average narrow gauge line of railway in India, have the honour to make the following report.

2. We have, in the first place, to express our regret that the conclusions we have been led to adopt have not been concurred in by our colleague in the committee, Mr. Fowler. The points of difference that arose between Mr. Fowler and ourselves, after full discussion of all the questions involved, were considered by all of us to be of such a nature as to render a joint report impossible.

3. The despatch of the Government of India, No. 51 Railway, dated 17th May 1870, which has been communicated to us explains the chief grounds on which the Governor General of India in Council has come to the conclusion that it will be proper to adopt, for many of the railway extensions now contemplated in India, a narrower gauge than that of the main trunk lines, and that 3 ft. 6 in. appeared to be the maximum width necessary for the new gauge.

4. The reference made to us being based on this conclusion it does not seem to be necessary that we should discuss the propriety of introducing such a gauge for railway extensions in India, further than may be requisite for the purpose of explaining the grounds which have determined our views on the points specifically referred to us. But we may state our general concurrence in the arguments used by the Government of India in the Despatch above referred to, and in the principle it lays down, that the Government should be guided, when dealing with projected railway extensions, by the requirements of the country and should not "waste a rupee in perpetuating a standard of railway in excess of those requirements, merely because it exists in certain parts where it may or may not be suitable."

5. Starting, then, with the conclusion of the Government of India, that the ordinary type of railway hitherto constructed in India will often exceed the requirements of the traffic on projected extensions, the first question that we have to answer is, how can that type be modified with the best economic result?

6. It is manifest that this object may be effected in either of two ways: first, by reducing the weight of the rail and the strength of the other parts of the permanent way, and of the works and rolling stocks, in due proportion, but retaining the existing 5½ ft. gauge; or, second, by reducing not only the rail, the permanent way, the works and stock, but the gauge also. Further, it is clear that by a suitable arrangement of details a complete gradation could be established between a line constructed with the heaviest rails and permanent way known in India, on a broad gauge, and an extremely light line on such a gauge, for instance, as that in use on the Festing Railway.

7. For a moderate traffic, which in the nature of the present case is what has to be dealt with, a narrow gauge railway, say of 3 ft. 6 in. or under, would certainly provide sufficient carrying power, and such a line will of course be more economical in respect to first cost than one on such a gauge as that hitherto in use in India. The inquiry, therefore, arises, whether there is likely to be any countervailing advantage in retaining the 5 ft. 6 in. gauge, and, if so, what is its value, and what additional outlay it seems likely to justify.

8. The advantage of uniformity of gauge is of course, not to be disputed, especially where, as in England, railways are thickly interlaced, goods traverse comparatively small distances, are large in absolute quantity, and are frequently of small intrinsic value. The necessity for even a single transfer, under such circumstances, from one set of wagons to another may occasion an intolerable waste of time and money. But the traffic to be obtained in India at the present time—and, so far as we can judge, the remark is likely to be applicable for an indefinitely long period—is very different from that of England. It is comparatively small in quantity and large in intrinsic value, and it is carried over much greater distances. We cannot suppose that, under any circumstances, goods would be exposed to transfer more than once; nor, assuming a considerable development of narrow gauge lines, and the use of the existing gauge in cases where a break would be manifestly unwise, do we think that more than a small fraction of the total weight carried would be exposed to transfer at all.

9. The cost of the transfer of goods from one set of wagons to another, at points where break of gauge occurs, has been variously estimated at the charge for railway transport, over a distance of from one to ten miles, on the weight transferred. Our own opinion is, that for the average of Indian goods, it

would not amount to more than 4d. per ton. But from the causes that have been just stated, namely, the comparative great distance travelled and small quantities moved, we should not think that, even if the highest estimate of the cost of transfer were correct, it afforded sufficient ground to condemn the adoption of a second gauge, except under circumstances which will rarely occur, as for instance, in the case of short branches to an existing broad gauge line.

10. We may perhaps facilitate the appreciation of the probable worst consequences of the adoption of a second gauge by considering the following extreme hypotheses. There are now 5,000 miles of railway in existence or under construction in India, on the 5½ ft. gauge, and it is contemplated to construct 10,000 miles more railway. Let it be supposed that the extensions are to be narrow gauge, and that a third rail is laid on all the existing railways so as to obviate by the use of a mixed gauge, the inconvenience of break of gauge. The cost of the third rail might be about £1,000 per mile for 5,000 miles, or, if it be taken as a charge on the 10,000 miles of extension, it would add 10s. per mile to their cost. Taking in illustration the rates that we have arrived at in our estimates for the Indus Valley Line, an extension on a 3 ft. 9 in. gauge would cost, without the addition above stated, £5,200, and with it, £5,700 per mile; while on the 5½ ft. gauge, with 44 lb. rail, the cost (without the addition) would be £7,000 per mile; with a 60 lb. rail, £7,900 per mile; and with a 68 lb. rail, and the construction in other respects which has been commonly used hitherto, to less than £8,300 per mile. The above sums include a moderate proportion of rolling stock, suited to the several weights of rail and gauges. But we have not thought it proper to make any special allowance for the provision of the narrow gauge rolling stock that might be needed on the old lines, which it is supposed are to be fitted with a third rail; because extra stock would be required on the old lines for the increased traffic due to the narrow gauge extensions, whether a third rail were laid or not. So far as might be necessary for the convenience of the traffic, any more substitution of narrow gauge for broad gauge stock on the old lines might take place gradually, as the old stock required renewal, without causing extra outlay.

11. It may also be pointed out, on the basis of the figures above given, that, while the interest charge (at 5 per cent.) on the capital required to produce a mile of the narrow gauge line would be £260 yearly, that on the cheapest broad gauge line would be £350. It is quite impossible that the difference between these sums, £90 yearly could be required to meet the share of one mile of railway in the cost of the transfer of goods at the few points where break of gauge took place; more probably, one-tenth of the amount would be in excess of the actual outlay due to such a cause.

12. Nor is it correct to assume that full advantages of uniformity of gauge can be obtained where a junction is made between lines on which the rails are of very different weight, although the gauge is the same.

13. The heavy engines, which are used economically on the heavy rails, could not be allowed to run unrestrictedly on the light rail, while those suited for the light rails would not be the best, economically, for the heavy rail; hence a separate class of engines would be required for the light rail. Again, if the rail were reduced below, say, 45 lb. per yard, the weight on the wagon wheels which would be proper for the heavy rails would be too great for the light rails, and either the wagons run on the heavy rails must be loaded with reduced weights, which would reduce the proportion of paying load to dead weight, or their loads must be transferred to other wagons at the junction, which is equivalent to a break of gauge.

14. A study of the actual facts of the existing railway traffic of India has led us to the conclusion that, in many cases, the magnitude and weights of the vehicles and engines composing the trains which are run on the 5 ft. 6 in. gauge, are disproportionate to the work that has to be done, and that due economy cannot be obtained under like circumstances, on the railways about to be undertaken, unless their whole scale is brought into a more satisfactory relation with the traffic likely to arise upon them. Thus we find that on the north-west section of the Madras Railway, in the first half year of 1869, when the line had been in operation for upwards of ten years, the average paying load of a train was 76 passengers and 38 tons of goods. On the north-west line, it was 67 passenger and 26½ tons of goods. The traffic is worked on this railway by mixed trains, and the trains of the south-west section were constituted on the average as follows—

	Tons.
Weight of engine and tenders	40.00
" vehicles (passenger and 12 goods)	69.45
" passengers and goods	26.25
Total	135.70

The passenger traffic was, therefore, very little in excess of the capacity of one carriage, while four was employed. The goods were a fair load for about four or five wagons, while twelve

was required. There is every reason to think that the management of the Madras Railway is very careful; and the numerous instances from these figures, that for the convenience of accommodating varying numbers of passengers, and picking up and dropping goods along the line, vehicles and engines have been employed which would have sufficed for the wants of a very much larger traffic. We state this making due allowance for the fluctuating proportions of up and down traffic.

12. Looking at the question in all the foregoing points of view, we see no reason to doubt that the financial and other conditions under which it is proposed to carry out the new railway in India will be met by the adoption of a narrow gauge, then by retaining the 3 ft. 6 in. gauge and using rails, engines, and vehicles of a reduced weight.

13. The next question is what that narrow gauge should be. On this point we have first to remark that, in our opinion, the carrying capacity of a railway on any gauge which will satisfy the conditions of safety and convenience will, for a very lengthened period, be in excess of the requirements of the traffic likely to be brought upon the projected extensions of railways in India for which a narrow gauge is contemplated. Therefore, as it would be inconvenient to have more than one narrow gauge, we are of opinion that to obtain the greatest economy in construction, and consequently, the greatest possible extension of railways in India, the gauge selected should be not only narrow, but the narrowest which will combine convenience of transport for various kinds of goods and passengers with reasonable speed, and with economy and safety in working. The more nearly the gauge selected reaches this limit, the more nearly, in our opinion, will the object the Government have in view be effected.

17. We may remark here that the question of what gauge is most convenient is one which has given rise to much controversy, and which in the course of these last 20 years had been viewed in very different lights. Up to a period extending considerably beyond the date (1850) at which the Indian gauge was fixed at 5 ft. 6 in., the balance of opinion was decidedly in favour of a wider gauge than 4 ft. 8½ in., mainly on the ground that this gauge did not allow sufficient width for the working parts of the locomotive. Subsequent experience has, however, modified this opinion, and it is now generally admitted that an engine suitable for ordinary traffic may be put upon a much smaller gauge than 4 ft. 8½ in. Gauges of 4 ft., 3 ft. 6 in., 2 ft. 6 in., and 2 ft., are now in use, the 3 ft. 6 in. gauge being the one most commonly employed, having been adopted in Russia, Norway, Queensland, and in parts of North and South America.

18. We have personally inspected the now well-known Festiniog line on which the 2 ft. gauge is used, and the Norwegian railways constructed on the 3 ft. 6 in. gauge.

19. The Festiniog line was originally a horse tramway, and the employment of the locomotive upon it only dates from 1863. The gauge of this line is undoubtedly too narrow, not only for the convenience of the locomotive, but for some classes of ordinary traffic. But it has offered no serious mechanical difficulty to the conduct of passengers as well as goods traffic, at a speed which might be considerably increased if necessary. The curves of this line are as remarkable as its gauge, their radii being as low as even two chains.

20. The 3 ft. 6 in. gauge seems to have been adopted in Norway as being economical without involving any material reduction in carrying power below that of the English narrow gauge. It is manifest that lines on this gauge are worked with as much convenience to the traffic as on any broader gauge, and, from our personal experience, we are able to state that a speed of 36 miles an hour may be attained on them with complete steadiness both of engine and vehicles.

21. There can, therefore, be no doubt that a thoroughly satisfactory railway may be constructed on a gauge of 3 ft. 6 in. But the question, after all, is whether 3 ft. 6 in. is the minimum gauge which will answer the purpose of the projected Indian extensions, or whether some gauge intermediate between those of the Festiniog and Norwegian lines will not suffice.

22. The conclusion we have arrived at, upon a careful examination of the whole question is, that a gauge of 3 ft. 6 in. is unnecessarily wide for the proposed narrow gauge lines in India, and that its adoption would involve the sacrifice to a material extent of the object which the Government has in view.

23. Our conviction is, that the gauge for lines need not exceed 3 ft. 9 in. We have satisfied ourselves that engines of sufficient power may be put on this gauge to draw at a sufficient speed the largest traffic which the lines for which a narrow gauge is suitable are likely to carry; that vehicles may be used on this gauge which will afford complete accommodation for all classes of passengers and goods traffic, and that this gauge presents no reasonable objection on the ground of risk, whether from wind, oscillation, or other causes of discomfort, to the economical and convenient transport, at a sufficient speed, of both passengers and goods.

24. Questions of hardly less importance than that of the gauge are, the maximum weight to be placed on an axle, and the speed at which trains are to run, because these determine the weight of the rail, the strength of the road generally, and the character of the locomotive and rolling stock,

25. The maximum weight on the engine axles of the Norwegian, and, we believe, of the Queensland Railways also, is about 7 tons, 3½ tons to the wheel. The maximum weight on the wagon axles of the Norwegian line is as much as 2½, and perhaps 2½ tons per wheel. But we travelled on the Drammen line, at the average rate of 30 miles an hour, on an engine which has a weight of less than 5 tons on each wheel, or less than the weight on the wheels of the wagon stock, and which is found sufficient for all the light work of the line. This engine has four wheels coupled, the total weight for adhesion being 7½ tons only. The average working speed on the Norwegian lines is 14 miles an hour.

26. Our opinion is, that for a level country such as we may chiefly expect in India, the maximum weight on an engine wheel for the narrow gauge lines should not exceed 3 tons in regard to speed, we think that an average of 15 miles an hour should not be exceeded.

27. For such weights and speeds we recommend that the rails ordinarily employed should be of the same weight as those in use on the Thronthjem line, the oldest of the Norwegian narrow gauge lines, namely, 36 lb. per yard; and that they should be of the same form, namely, that known as the contractor's or Vignoles' rail. This rail, which has a flat base, and therefore requires no chair, has now been in use on the Thronthjem line for six years. The engines passing over it have from 3 to 3½ tons on each of their four driving wheels, and though it is of very ordinary make, it shows no signs of undue wear. In the face of such an example we cannot recommend a heavier rail, and we think that on the lightest lines to be constructed on which engines of reduced weight might work, a still lighter rail might be adopted. The question of making the rails of steel or iron is one, in our opinion, to be decided entirely by price. We do not think, under the circumstances of the proposed lines of railway, that it would be desirable to pay a sensibly larger price for steel than for iron, and we doubt the policy of diminishing the weight of the rail in order to compensate for the difference in cost.

28. We should observe, that on the Drammen line, built since the completion of the Thronthjem line, a 40 lb. rail is employed, but we satisfied ourselves that the additional weight was not given in consequence of any failure of the lighter rails. The reasons assigned for it to us were of a different nature, and do not affect our conclusion, as above stated.

29. The size of the sleeper must depend on the class of timber employed. On the Norwegian lines, half-round timbers 7 ft. long and 9 in. diameter, are used, flat side downwards, spaced, as a rule, 2 ft. 9 in. centre to centre, the rail being placed on an adzed bed about 4 in. square. If creosoted Memel were employed for the Indian Railways on a gauge of 2 ft. 9 in., we think the sleeper should be rectangular, measuring 2 in. scantling 8 in. by 4 in. Assuming them to be spaced 3 ft. apart, centre to centre, a length of 5 ft. 6 in. will give them a bearing surface proportionate, for the weight they have to carry, to the bearing surface given on broad gauge lines. It will be understood that it is not meant that the sleepers should be strictly of these dimensions. They might be of any appropriate size that would suit the timber obtainable in the country, care being taken to increase their number if their scantling is reduced.

30. The rails should be fished at the joints and fastened to the sleepers with spikes. It will not be necessary to notch the rails for the spikes except adjacent to the joints.

31. The depth of ballast must be determined by considerations of the weight to be carried and the requirements of drainage. As banks in India are usually very solid after two or three rainy seasons, we are of opinion that, for the class of railway we propose, 6 in. of ballast under the sleeper will be sufficient.

32. The width of the ballast at the base need not exceed 5 ft. 6 in. The width of the bank at formation level need not exceed 9 ft. 6 in. for single lines.

33. Cuttings, tunnels, and drainage openings, would be arranged in accordance with these dimensions making the necessary allowances for side drainage and width of rolling stock.

34. Fencing need only be employed in the neighbourhood of stations, road crossings, and thickly inhabited localities. The ditch and mound, with one or two wires on the top attached to timber posts should be sufficient, but in many places a live fence will be possible and should be cultivated.

35. The station buildings should be as simple as possible. Nothing is more striking in Norway than the simplicity of the stations. They are constructed entirely of wood. This will be an impossible material for India, but we think that kutcha or kutchha pucca work may be adopted in place of pucca work to a large extent, and platforms should be entirely dispensed with. Semaphore signals may also be dispensed with, except perhaps at important junctions. They are not used on the Norwegian railways, nor on many of the Continental lines where traffic is light.

36. In regard to wrought iron girders for bridges, we would recommend, that for all spans of less than 50 ft., the rolling load should be calculated at one ton to the foot, that for all girders of larger span the rolling load should be calculated at one ton to the foot up to 50 ft., and 5-16ths of a ton for every foot in



excess of 50, the usual strain to which iron is subjected, being adopted.

37. It is difficult to advise specifically in regard to locomotive stock, as the character of the engine must depend on that of the line and the expected traffic. It may, however, be laid down as a rule, that no engine should have less than four wheels coupled, giving, at 3 tons to the wheel, 12 tons of adhesion. Such an engine, with a properly designed boiler, will be sufficient, under ordinary circumstances, to draw a gross load of 120 tons up a gradient of 1 in 500, at the rate of 20 miles an hour. If greater adhesion be required, six or even eight wheels may be coupled. The diameter of the driving wheels need not exceed 3 ft.

38. In regard to other rolling stock, taking the maximum weight on four wheels, at about 8 tons, a suitable diameter for the wheels would be 2 ft., the journals being  $3\frac{1}{2}$  in. diameter by 6 in. long, and the axles 3 in. in diameter.

39. Passenger carriages might be 18 ft. 6 in. long, and 6 ft. wide, in both cases externally, their internal height being 6 ft. They would be on four wheels, the wheel base being 9 ft. They might be divided into four compartments for third class, to carry 32 passengers; into three compartments for second class, to carry 18 passengers; and might be specially arranged for first class to carry 6 first-class passengers for short journeys, or three for long journeys, with luggage and servants, with washing and closet conveniences. The weight of such carriages would, it is estimated, not exceed  $3\frac{1}{2}$  tons. Where the traffic or the nature of the line rendered it desirable, the carriages might be double the above length, and carried on bogies.

40. The ordinary goods wagons should be equal to a load of 5 tons, the available internal capacity of the covered wagons being about 300 ft. This would give a wagon about  $1\frac{1}{2}$  ft long by 50 ft. wide inside. We suggest that the wagons should be designed, in the first instance, without bearing springs. The dead weight of the covered wagon need not exceed 20 tons. As in the case of the passenger stock, longer wagons carried on bogies or shorter wagons could be used as the traffic required.

41. The springs in both carriages and wagons should be placed under the journals. Their floors need then be only 15 in. above the rail, and they would be accessible without platforms. The total height of the passenger carriages from the ground, allowing for a double roof, need be only 7 ft. 6 in. The draw spring should combine with it a single central buffer.

42. We have satisfied ourselves that carriages of the kind we have described would have sufficient stability to resist being overset during gales of wind, except, perhaps, under circumstances of a very unusual kind, when, however, they would be in little greater danger than the carriages of the broad gauge lines. They would be certainly as safe as the carriages hitherto built for the 3 ft. 6 in. gauge, of which we have heard no complaint on this ground.

43. As to be general carrying power of a 2 ft. 9 in. gauge railway, we are of opinion that, within the practical limits of the traffic likely to be dealt with on the proposed extension lines in India, the vehicles of the 2 ft. 9 in. gauge would in every respect meet all requirements as fully as the vehicles of any other gauge however wide. We affirm this broadly, without any hesitation, being convinced that the only possible doubt that can arise as to the complete efficiency of a well constructed and well designed narrow gauge railway has regard to its ability to carry an extremely heavy traffic, or large trains running at high speeds, neither of which conditions can occur from the nature of the case.

44. As between to a 2 ft. 9 in. gauge and a 3 ft. 6 in. gauge, we think that no sensible difference of carrying power could exist, in either the passenger or goods vehicles. The addition of one or two carriages to a train would at once, without increase of dead weight, bring up the 2 ft. 9 in. gauge line to the level of a 3 ft. 6 in. gauge line in respect to passenger. As to goods so long as the due relation is maintained between dead weight and paying load, the carrying power of the line is altogether determined by the gradients and tractive force of the engines, which last, between the limits of 2 ft. 6 in. and 3 ft. 6 in. would be almost entirely governed by the weight of the rail.

45. In conclusion we wish it to be fully understood that the ground on which we recommend a 2 ft. 9 in. gauge is not that it is necessarily better than any broader gauge, but that the main routes on which the heavier traffic has to be carried, being already constructed on the 5 ft. 6 in. gauge the narrow gauge should not be wider than what is sufficient for the traffic to be carried on the extensions, and that for this a gauge of 2 ft. 9 in. is enough. However small, in point of cost the difference may be between a railway on a gauge which is enough, and a railway on any broader gauge, we contend that, under the circumstances of India, the available means of the Government will be better applied to constructing an increased length of line on the narrowest gauge that is sufficient, than a reduced length on a wider gauge.

We have the honour to be, sir, your obedient servants,

(Signed) R. STRACHEY  
O. H. DICKENS.  
A. M. RENDEL.

## DEVELOPMENT OF COMMERCIAL RELATIONS BETWEEN RUSSIA AND INDIA THROUGH THE SUZ CANAL.

Memorandum on the probable effect of the opening of the Suez Canal on the trade of Russia with the East Indies, &c., drawn up by Mr. Thomas Mitchell from statements published in a report to the Society for the Promotion of Russian Trade by Mr. Skalkoffsky, who represented the Society at the opening of the Suez Canal.

The Society for the Promotion of Russian Trade and Industry having requested Mr. Skalkoffsky, one of their members, to assist at the opening of the Suez Canal, that gentleman has recently presented the Society with a printed report, of which the following is to a great extent merely an abstract:—

*Distances.*—Mr. Skalkoffsky points to Odessa as the port to which the trade of Russia with China, India, &c., will ultimately be attracted by the great advantages of the canal route. Odessa is seldom frozen in winter, and will soon be connected by rail with the west of Europe. He expects that the merchandise of the far East will be transported thence to Moldavia, Wallachia, Galacia, East Prussia, Sweden, and other countries. The advantages of Odessa in respect to distance are shown as follows:—

From Odessa. Nearer than from South-  
via Suez. ampton round the Cape.  
Nautical miles.

To Bombay .. .. .	3,948.....	6,792
„ Ceylon .. .. .	4,668.....	5,912
„ Calcutta.....	5,688.....	5,912
„ Singapore .. .. .	6,078.....	5,708
„ Hongkong .. .. .	7,508.....	5,672

Odessa is nearer to Bombay than the following European ports, viz:—

Trieste by 152 nautical miles.	
Liverpool „ 2,060 „ „	
London „ 2,076 „ „	
Bremen „ 2,462 „ „	
Cronstadt „ 3,412 „ „	

Steamers can make the voyage from Odessa to Bombay in the following time, viz:—

	Miles.	Days.
Odessa to Constantinople, with stoppage there.	352	
Constantinople to Port Said .. .. .	780	
	1,132	7
Passage of canal with stoppage		3
Suez to Aden .. .. .	1,310	8
Aden to Bombay .. .. .	1,510	8
Total Days .. .. .		26

A steamer will therefore take seven days less in performing the voyage between Odessa and Bombay than between Bombay and Southampton. At the same rate, the time that a steamer will take between Odessa and the more distant parts in India and China will be as follows:—

	N. Miles.	Days.
Odessa to Point de Galle .. .. .	4,588	23
„ Calcutta.....	5,688	25
„ Singapore .. .. .	6,078	27
„ Hongkong .. .. .	7,508	28

East Indian cotton shipped at Bombay in sailing vessels reaches Moscow in the following number of days:—

	Days
Bombay to London .. .. .	110
London to St. Petersburg in steamer .. .. .	24
St. Petersburg to Moscow .. .. .	4
Total .. .. .	138

whereas if shipped to Odessa via Suez in a steamer, the time occupied would only be 33 days, thus:—

	Days
Bombay to Odessa .. .. .	27
Odessa to Moscow .. .. .	6
Total .. .. .	33

or a gain of 95 days.

The following are the distances between Odessa and Moscow and St. Petersburg by rail now opened:—

	Vari. Dist. miles.	
Odessa to Moscow .. .. .	1,067	1,067
„ St. Petersburg .. .. .	2,171	1,467

*Cost of carriage.*—The present mean cost of carrying Indian produce to St. Petersburg via the Cape of Good Hope and England is shown in the following Table:—

TABLE A.

Goods.	Freight.		Total mean freight to St. Petersburg via the Cape.
	To London.	London to St. Petersburg.	
	Per ton.	Per ton.	Per ton.
Cotton from Bombay ...	30s. to 35s.	25s. 6d.	55s.
Tea " Calcutta ...	40s.	30s.	80s.
Indigo " " ...	72s.	40s.	115s.
Coffee " Bombay ...	85s.	27s. 6d.	62s.
Pepper " " ...	20s.	20s.	40s.
Dye-wood " " ...	20s.	30s.	50s.
Oil " Calcutta ...	45s. to 50s.	30s.	77s. 6d.
Tin " Singapore ...	40s. 6d.	22s.	62s. 6d.

In autumn the freights from London to St. Petersburg sometimes rise to 45s. a ton.

The carriage of the above goods to Moscow, the centre of the internal trade of Russia, is calculated to cost 55s. to 83s. 4d. per ton (33 copecks to 50 copecks per pood.)

Mr. Skalkoffsky shows that goods of a value of not less than £9-9-0 per ton will alone bear the present cost of carriage by the canal, and that the greater part of the goods carried between India and Europe come under that category, excepting linseed, raw sugar, rice, jute, wood, iron, &c.

The present rate of freight from Bombay to Trieste by the Suez Canal is about £5 per ton, but it will necessarily fall when greater competition comes into play. Although Trieste is further from Bombay than Odessa, yet the freight per steamer to the latter port remains higher on account of the transit dues in the Bosphorus and the greater dearth of coal at Odessa. At the same time, it will always be more difficult to find a return cargo at Odessa than at Trieste.

The following is a complete list of the goods which Russia at present obtains from Egypt, Africa, East Indies, China, Japan, the Indian Archipelago, and Australia:—

Aniseed.	Oil, castia.
Arrowroot.	" castor.
Asafetida.	" cinnamon.
Camphor.	" clove.
Cardamoms.	" cocoanut.
Cassia.	" palm.
Catechu.	Pepper.
Cacutohouc.	Pumbago (Ceylon).
Cigars, Manila.	Porcelain (Japan and China.)
Cinnamon.	Rice.
Cloves.	Rum.
Clove-heads.	Rhubarb.
Cochineal.	Sago.
Cocoa.	Sapan.
Coffee, Moccha.	Safflower (Bengal).
" Java.	" (Bombay).
" Malabar.	Sulphur.
" Ceylon.	Silk, raw.
Cotton, Egyptian.	" spun.
" Bombay.	" waste.
Australian copper.	" manufactured.
Cutbets.	Salammunio.
Dye-woods.	Senna leaves.
Dates.	Spices, various.
Ebony-wood.	Shallac.
Ginger.	Teak.
Gutta-percha.	Tamarinds.
Gums, various.	Turmeric (Bengal).
Indigo.	Tortoise-shell (Java).
Ivory.	Tobacco.
Mace.	Tea, Canton.
Mother-o'-pearl.	" Japan.
Nitre.	" East Indies.
Nutmegs.	Wool.
Nux vomica.	
Oil, aniseed.	

The greater part of the goods enumerated in the foregoing list are imported in very small quantities. The principal im-

portations have been under the following heads since 1867:—

*Imported into Russia in 1867, in 1868, in 1869.*

Poods.

Cotton (over the European frontier) ...		2,585,931	2,810,229	2,973,634
Indigo	47,141	47,057	47,057	47,057
Silk, raw	5,833	5,833	5,833	5,833
" spun	8,297	8,297	8,297	8,297
Rice	347,653	347,653	347,653	347,653
Sago	1,224	1,224	1,224	1,224
Coffee	407,193	407,193	407,193	407,193
Gum	78,541	78,541	78,541	78,541
Cacutohouc	18,248	18,248	18,248	18,248
Tin	40,762	40,762	40,762	40,762
Pepper	80,155	80,155	80,155	80,155
Ginger, clove-heads, mace	25,364	25,364	25,364	25,364
Cloves, cinnamon, nutmegs	12,230	12,230	12,230	12,230
Tea over European frontier	405,557	405,557	405,557	405,557
Copper	129,819	129,819	129,819	129,819
Dye-woods	470,474	470,474	470,474	470,474
Nitre	123,397	123,397	123,397	123,397
Gum Benzoin	20,845	20,845	20,845	20,845
Gall-nuts	16,004	16,004	16,004	16,004
Plumbago	45,755	45,755	45,755	45,755

On the assumption that one-third of the cotton shown above is Indian, and half of the coffee from Java, &c., and without including some of the minor items, the total weight of Asiatic goods imported into Russia through Custom-house on the European frontier is about 40,000 tons, of which a tenth part is brought to ports in the south of Russia.

The trade of those ports, and of Odessa in particular, will, however, be considerably improved by the railway communication now established with Moscow and St. Petersburg.

Mr. Skalkoffsky makes the following interesting observations respecting the goods of Asiatic origin consumed in Russia:—

1. *Cotton.*—Cotton is the most important article of trade between India and Russia. The quantity annually imported on the European frontier of Russia is nearly three million poods (48,000 tons.) In 1868 a supply of two and a half millions was drawn from the following countries, viz:—

From England	1,036,130	Poods.
" Prussia	1,030,208	"
" Hanseatic towns	52,859	"
" Austria	12,737	"
" Turkey	916	"
" Little S...	115,253	"
" Roumania	128	"

The cotton spinners of Russia purchase the raw material in Liverpool and London through their agents at those ports, but the bulk of the cotton used in Russia, and particularly at Moscow, is imported by the Bremen House of L. Knoop, who have agents at Bombay and New York.

It is chiefly imported at St. Petersburg (1,228,405 poods), but a considerable quantity (848,545 poods in 1868) is brought over the land frontier from Konigsberg.

East Indian and Egyptian cotton is now being brought direct to Russia by the Suez Canal route.

The use of Egyptian cotton is very limited in Russia, owing to its price, and particularly from its high quality.

It is used for spinning numbers above 60, whereas the Russian mills chiefly produced the numbers between 6 and 42. It is, however, being more and more used in spinning fine yarns for mixed woollen goods.

The present price of Egyptian cotton at Moscow is R. 16 to R. 17 per pood (about £6-16-7 per cwt.), or between 1s. and 1s. 2d. per lb.

According to the returns of the British Board of Trade, the cotton imported into Russia in 1867 had been derived from the following countries, viz:—

United States	205,435	cwts.
Brazil	50,930	"
Egypt	8,629	"
East Indies	127,606	"
Other countries	9,880	"
Total	427,470	cwts.*

Mr. Skalkoffsky states that the total quantity of Indian or Surat cotton now brought to Russia is 2,000,000 tons per annum. It is imported from Bremen as well as from Liverpool, and a small quantity comes in by way of Trieste, since the railway tariff between that port and St. Petersburg has been reduced to 70 copecks per pood (6s. 9d. per cwt.)

The use of Surat cotton in Russia is constantly on the increase, and keeps pace with the increase in the consumption of all cotton goods that are used by the masses of the people.

The yearly increase in the consumption of raw cotton in Russia is estimated by the manufacturers of Moscow at 3 per cent. It is now an article of prime necessity in Russia, and the slightest fall in its price has the most favourable effect on its consumption.

\* Inclusive of transhipment at Cronstadt, clearance at Custom house, &c.

In 1869 the prices of East Indian cotton at St. Petersburg fluctuated between R. 12½ and R. 14½ per pood (£5-1-4 and £6-0-0 per cwt.) higher.

In Moscow the prices are generally 50 copecks per pood (4s. 2d per cwt.)

The present cost of carrying East Indian cotton to Moscow is about 85 copeck per pood (7s. per cwt.), thus:—

To Liverpool via the Cape ... ..	30s.	to 50s.	per ton.
" Suez ... ..	60s.	to 80s.	"
Liverpool to St. Petersburg, 20c. to 25c. per pood ... ..	35s. 4d.	to 41s. 8d.	"
St. Petersburg to Moscow, 35c. per pood ... ..	58s. 4d.		"

Taking the freight of cotton from Bombay to Odessa by the Suez Canal at £3 to £4 per ton, and by rail from Odessa to St. Petersburg at 60 to 70 copecks per pood (6s. to 5s. 9d. per cwt.), the cost of carriage by way of Suez will be slightly greater than via the Cape, Liverpool, and St. Petersburg, but the gain in time by the former route will fully make up for the extra cost of carriage. Mr. Knoop, the great importer of cotton, is of opinion that 3,000 to 4,000 bales might at once be imported into Russia each month from Bombay by way of the Suez Canal and Trieste or Odessa, and that as much as a million poods (16,500 tons) per annum will, in all probability, be imported into Russia by that route.\*

The East Indian cotton that best suits the Russian market is the Sawginned Dharwar, both the "fair" and "good" qualities. There is no duty on the importation of raw cotton into Russia.

2. *Indigo*.—Russia makes use of 47,087 poods (757 tons) of indigo each year. It is imported from the following countries:—

England ... ..	19,561	Poods.
Prussia ... ..	19,933	"
Italy ... ..	128	"
Holland ... ..	4,478	"
Greece ... ..	508	"
France ... ..	1,821	"
Austria ... ..	668	"

\* The rouble has throughout been converted at the exchange of 32d. The present rate of exchange is 23d. to the rouble.

St. Petersburg is the centre of the indigo trade of Russia, as more than 25,000 poods are annually brought to that port.

The prices of indigo were as follows in 1869:—

At St. PETERSBURG—

Bengal ... ..	R. 145 to R. 160	per pood £20	to £25-4-0	per cwt.
Java ... ..	R. 185 to R. 190	"	£25-17-0 to £24-8-0	"
Native ... ..	R. 115 to R. 125	"	£24-11-7 to £21-14-6	"

At MOSCOW—

Bengal ... ..	Ra. 138 to Ra. 170	per pood (£57-1-9 to £70-5-9)	per cwt.
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The Russian import duty on indigo is R. 9 per pood (£2s. 6d.) at the par exchange) per cwt.)†

3. *Rice*.—The consumption of rice in Russia is comparatively insignificant (vide Table A). The prices were as follows towards the end of 1869:—

At St. PETERSBURG—

Bengal ... ..	R. 2-40 to R. 3-20	per pood 19s. 10d. to 26s. 5d.	per cwt.
American ... ..	R. 2-25 to R. 3-50	per pood 18s. 7d. to 29s.	"

At ODESSA—

America ... ..	R. 2-20 to R. 2-40	per pood 18s. 4d. to 19s. 10d.	per cwt.
Italian ... ..	R. 2-60	21s. 6d.	"

The Russian Customs duty on rice is 50c. per pood, or 4s. 11d. per cwt.†

4. *Coffee*.—Were it not for the competition of tea, coffee might become an article of great importance in a direct trade with the East. Nearly one-half of the coffee consumed in Russia is imported from England.

Notwithstanding a very considerable reduction of the duty on coffee (which is, since 1869, R. 1-50 per pood, or 14s. 3d. per cwt. at par), its importance is but slightly on the increase. It is mostly used by the German and Finnish population of Russia and by the higher classes. It is also extensively mixed with chicory.

(To be continued).

\* The Russian pood is equal to 36.05 lbs. avoird.

† At the par exchange; now 24 per cent. less.

## THE PUBLIC REVENUE AND EXPENDITURE.

Revenue and Expenditure of the Government of India for the first seven months of the year 1870-71, as compared with the corresponding period of 1869-70.

REVENUES AND RECEIPTS						EXPENDITURE					
		April to Oct 1869	April to Oct 1870	Increase	Decrease.			April to Oct 1869	April to Oct 1870	Increase	Decrease.
		£	£	£	£			£	£	£	£
I Land Revenue		8,451,92	8,810,380	358,46		1 Interest on funded and Unfunded Debt		1,415,122	1,602,021	186,899	
II Tributes and Contributions from Native States		347,69	3-8-0	41,106		2 Interest on service Funds and other Accounts		303,178	278,924		
III Forest		208,375	19,158		25,218	3 Rents, Taxes, Drawbacks, &c.		332,041	194,906		24,250
IV Excise on Spirits and Liquors		1,259,862	1,857,466	97,544		4 Land Revenue		1,320,238	1,323,600		37,135
V Assessed Taxes		469,799	018,259	84,469		5 Forest		164,387	185,994		3,653
VI Customs		1,267,754	1,41,199	183,441		6 Excise on Spirits and Drugs		133,661	160,158		26,708
VII Salt		3,018,641	3,670,855	302,014		7 Assessed Taxes		10,830	24,895		58,492
VIII Opium		4,654,067	4,622,549		190,546	8 Customs		108,920	107,471		4,065
IX Stamps		1,163,978	531,84		818,121	9 Salt		223,087	219,525		3,561
X Mint		87,594	25,840		72,254	10 Opium		1,454,187	1,658,438		4,582
XI Post Office		807,84	478,84	105,47		11 Stamps		60,004	34,658		25,346
XII Telegraph		547,38	880,87	803,494		12 Post Office		50,268	36,82		16,27
XIII Law and Justice		143,663	149,854	3,891		13 Telegraph		301,282	368,837		2,545
XIV Police		143,663	149,854	3,891		14 Administration		647,409	659,840		22,377
XV Marine		44,074	4,432		9,612	15 Minor Departments		118,378	111,071		8,307
XVI Education		64,813	147,69	62,786		16 Law and Justice		1,480,380	1,671,348		60,968
XVII Interest		420,740	269,809		61,841	17 Office		1,289,665	1,286,197		34,478
XVIII Miscellaneous						18 Marine		218,264	206,396		7,868
						19 Education		264,645	281,778		32,899
						20 Ecclesiastical		93,070	88,387		5,683
						21 Medical Services		252,708	288,652		15,944
						22 Stationery and Printing		147,007	131,678		15,329
						23 Political Agencies		243,122	152,074		91,048
						24 Allowances and Assignments under Treaties and Amalgamations					
						25 Miscellaneous		789,836	789,594		242
						26 Superannuation, Retired, and Compensatory Allowances		410,136	466,886		56,750
						27		402,086	453,420		51,334
Total..		23,511,00	24,478,318	2,679,896	1,117,681	Total..		2,567,080	2,886,811	617,300	328,730
Army Miscellaneous		459,441	409,129		26,312	Army..		4,339,871	5,902,002		337,588
Public Works		36,719	70,884		16,885	Public Works		5,025,008	1,745,798		1,291,815
Ordinary.		307,980	92,768		115,185	Public Works		26,088	44,062		11,098
Do Extraordinary do.			9,412	9,412		Ordinary.		171,685	34,195		87,440
Capital Account			9,896	9,896		Do Extra.		7,607	4,006		3,601
Total Revenue..		23,548,065	25,080,745	2,965,088	1,379,118	Do Extra.		371,304	351,532		19,772
						ordinary.		1,380	308,348		1,380
						Total Expenditure..		27,259,038	31,128,968		3,869,930

\* Includes Income Tax realized in the M. and P. W. Departments up to Sept. only.

† Includes Refunds in M. & P. W. Departments up to Sept. only.

QUARTERLY RAILWAY RETURNS.  
PUBLIC WORKS DEPARTMENT

COMPARATIVE Abstract of Traffic on the Indian Railways for the 1st, 2nd, and 3rd Quarters of 1869 70

East Indian Jobbapore	Faster Beugal	Calcutta and N. E. (S)	Orissa and Nalabond.	Punjab	Delhi	Madras.				Great South Can of India	C. Arctic	Great Indian Peninsula	Kharagpur Branch.	Bombay Porcel and Central India	Sindh	Total of All Lines.																
						S W Line	N W Line	1 69	1 67																							
1870	1869	1870	1869	1870	1869	1870	1869	1870	1869	1870	1869	1870	1869	1870	1869	1870																
718,604	729,430	86,986	90,694	41,666	41,006	2,023	2,238	4,972	5,780	57,538	39,560	748	70	72	97,250	91,400	3,181	23,088	17	1	16,346	757	1,721	51,727	499,936	131	112,486	26,408	18,778	16,806	710,285	1,004,000
1,131	1,131	223	335	115	118	26	23	42	42	246	24	264	174	411	492	216	8	164	161	19	19	1,062	874	7	315	307	106	107	4,446	4,108		
55,282	54,572	2,815	2,279	9,2	8,328	186	173	615	44	2,117	2,277	4,518	2,383	7,481	7,284	2,3,5	1,76	1,253	1,231	59	79	29,247	38,446	50	14,387	10,031	1,231	1,262	121,618	154,706		
458	482	1278	107	262	298	60	61	130	106	89	92	1,9	18,8	16,2	109	96	79	75	31	42	269	410	71	"	251	236	163	170	396	208		

## SECOND QUARTER

SECOND QUARTER																															
Total Earnings	706,444	623,617	32,143	24,787	39,069	24,908	1,915	2,410	6,016	5,139.6	7,736	77,567	63,119	28,776	97,387	134,692	27,971	35,131	13,253	17,136	10,541	1,659	54,350	383,013	776	171,727	122,541	23,744	25,139	1,761,750	1,440,268
Mean Mileage open	1,131	1,131	223	228	113	113	36	36	43	42	43	246	298	174	437	492	215	185	159	168	17	18	1,164	874	7	312	307	106	106	4,594	4,116
Average receipts per week	64,127	48,739	2,478	1,827	9,094	2,322	147	185	463	385	4,443	2,151	6,011	2,212	7,402	9,073	2,145	2,701	1,50	1,322	81	126	41,341	29,462	60	18,210	9,528	1,526	1,523	124,318	111,268
Average per mile open.	47.8	43.1	11.1	8.2	26.5	26.6	5.3	6.0	11.0	9.4	9.9	8.7	16.3	12.7	13.2	16.3	10.1	11.6	4.8	7.8	4.3	6.7	35.5	33.7	8.6	42.3	30.7	17.2	18.3	29.5	27.7

## TESTING QUALITIES

[illegible]



## PRICES OF FOOD THROUGHOUT INDIA.—LATEST.

BENGAL.—31st DECEMBER 1870.				
		Rice per rupee.	Wheat per rupee.	
		Seers.	18	Seers.
BUWDWAN DIVISION.	Burdwan	25	16	22
	Bancoorah	25	16	22
	Beerboom	31	16	22
	Hooghly	22	16	22
	Howrah	19	16	22
ORISSA	Midnapore	32	10	22
	Balsore	34	9	22
	Cuttack	29	12	22
ASSAM	Poorce	34	10	22
	Darrung	21	8	22
	Gualparah	17	20	22
	Kamroop	20	16	22
	Luckimpore	13	10	22
DACCA	Nowgong	16	0	22
	Seebasagar	16	10	22
	Dacca	26	11	22
	Backergunge	27	14	22
	Fariedpore	26	16	22
PATNA	Mymensing	26	9	22
	Sylhet	26	8	22
	Cachar	26	9	22
	Patna	24	21	22
	Gya	80	23	22
BHAUGALPORE	Chumprant	24	23	22
	Sarun	20	20	22
	Shahabad	22	22	22
	Tirhoot	27	19	22
	Bhaugulpore	27	25	22
SONTAL PEGHER.	Monghyr	31	26	22
	Purneah	28	19	22
	Gorha	34	14	22
	Nys Doonkah	28	16	22
	Rajmahal	26	22	22
PRESIDENCY	Deoghur	26	20	22
	Calcutta	20	16	22
	Nuddea	21	17	22
	Jessore	28	12	22
	24 Porgunnahs	24	10	22
RAJSHAHE	Rajshahye	25	18	22
	Ragroah	37	15	22
	Dinapore	36	14	22
	Maldah	25	17	22
	Moorshedabad	25	16	22
CHOTA NAGPORE.	Pubna	30	16	22
	Rungpore	24	15	22
	Lohardugga	28	14	22
	Hazareebagh	24	18	22
	Maunbhoom	32	12	22
CHITTHAGONG	Singbhoom	48	18	22
	Chitragong	25	9	22
	Bulloah	27	0	22
	Tipperah	56	0	22

## NORTH WESTERN PROVINCES.—31st DECEMBER 1870.

		Wheat.	Rice.
MEERUT DIVISION.	Dehra Dhoon	...	...
	Saharunpore	...	...
	Moonuffernugger	20 14	15 1
	Meerut	...	...
	Boolundshur	...	...
KUMAON	Kumaon	16 0	14 0
	Gurhwal	...	...
	Bijnour	...	...
	Moradabad	...	...
	Budaon	24 5	20 6
ROHILKUND	Bareilly	...	...
	Shahjehanpore	...	...
	Tera Porgunnahs	22 8	26 6
	Muttra	...	...
	Agra	...	...
AGRA	Furruckabad	22 1	15 14
	Mynpoorie	...	...
	Etawah	...	...
	Etah	...	...
	Jaloun	...	...
JHANSIE	Jhansie	19 8	10 12
	Ludhiana	...	...
	Cawnpore	...	...
	Futtehpore	...	...
	Banda	18 6	17 8
ALLAHABAD	Allahabad	...	...
	Humeerpore	...	...
	Jounpore	...	...
	Goruckpore	23 9	26 8
	Butee	...	...
BENARES	Asingurh	...	...
	Mirzapore	18 14	18 9
	Benares	...	...
	Ghaospor	...	...
	Ajmere	12 7	7 8

## ODISH.—31st DECEMBER 1870.

		Wheat.	Rice.
LUCKNOW DIVISION.	Lucknow	21 6	18 0
	Omoo	21 0	17 15
	Barabunkeo	21 8	19 0
	Seetapore	25 6	21 2
	Hurdul	24 4	17 13
FIRABAD	Kheroe	27 2	22 10
	Fyzabad	22 1	19 4
	Baraich	24 0	20 0
	Gondah	26 8	17 0
	Roy Bareilly	18 14	19 13
ROY BAREILLY	Seetapore	28 0	22 0
	Patna	36 0	18 0

## BOMBAY.—WEEK ENDING 31st DECEMBER 1870.

		Wheat.	Rice.
DELHI DIVISION.	Delhi	19 0	9 0
	Gurgaon	...	...
	Kanpur	...	...
	Rohtak	17 8	11 0
	Sirsa	...	...
HISSAR	Amballa	20 0	9 0
	Ludianah	...	...
	Simla	...	...
	Jullundhur	22 0	14 0
	Hoshiarpore	...	...
JULUNDHUR	Kangra	...	...
	Amritsar	18 0	9 0
	Syalkot	...	...
	Gurdaspore	...	...
	Lahore	18 0	11 0
UNITSAR	Ferozepore	...	...
	Gujeranwalla	...	...
	Rawal Pindi	18 0	9 0
	Jhelum	...	...
	Gujarat	...	...
LAHORE	Shahpore	18 8	8 0
	Multan	...	...
	Jhang	...	...
	Montgomery	...	...
	Mozaffnuggur	...	...
MOOTAN	Dera I. Khan	18 8	6 8
	Dera G. Khan	...	...
	Bunnoo	...	...
	Peshawar	15 8	6 0
	Kohat	...	...
DERA I. KHAN	Huzara	...	...
	...	...	...

## CENTRAL PROVINCES.—31st DECEMBER 1870.

		Wheat.	Rice.
NAGPORE.	Nagpore	16 0	16 5
	Blundara	12 8	20 0
	Chanda	15 4	15 0
	Wardah	17 8	12 4
	Balaghat	15 8	13 12
JULBULPORE.	Jubbulpore	19 4	13 14
	Saugor	18 4	17 0
	Dumoh	22 0	15 0
	Mundla	20 0	25 8
	Seonee	14 0	9 0
NERETIDA.	Baifool	13 8	0 0
	Hoshungabad	14 0	18 0
	Chindwara	15 0	13 0
	Nursingpore	13 3	11 12
	Nimar	24 0	25 0
CHITTESGURH.	Raepore	14 0	35 0
	Belaspore	20 0	30 0
	Sumbulpore	8 0	8 0
	Soroncha	...	...
	...	...	...

## MADRAS.—OCTOBER (latest quotations.)

		2nd-Sort Rice.	Cholum.
		Fuzly 1869 1870.	Fuzly 1869 1870.
NORTHERN SECTION.	Ganjam	314 284	235 196
	Vizagapatam	409 315	224 178
	Godavery	290 236	162 125
	Kistna	363 332	184 203
	Nellore	364 326	184 197
CENTRAL DISTRICTS.	Cuddapah	421 419	181 210
	Bellary	363 377	121 170
	Kurnool	419 413	155 197
	Madras	...	...
	North Arcot.	...	...
EAST CENTRE.	South Arcot.	434 293	268 143
	Tanjore	399 264	240 152
	Trichinopoly.	418 309	204 154
	Madura	442 344	184 155
	Tinnevely	448 432	234 240
SOUTHERN SECTION.	Coimbatore	475 405	251 239
	Neilgherries	711 533	320 320
	Salem	406 300	214 160
	South Canara	433 372	...
	Malabar	453 393	...

## BOMBAY PRESIDENCY.—OCTOBER (latest quotations.)

		Atta per rupee.	Atta per rupee.
		5 1/2 Seers.	11 Seers.
COLABA	Tanna	5 1/2	11 1/2
	Rutnacberry	5 1/2	11 1/2
	Dapool, D.	...	...
	Vingoria	...	...
	Sawant Waree	...	...
NORTH CANARA	Rural	...	...
	Broach	...	...
	Amalabad	...	...
	Katra	...	...
	Outch	...	...
GUJARAT	Gujarat	...	...
	Residency	...	...
	Shikarpore	...	...
	...	...	...
	...	...	...

## STATEMENT OF THE GOVERNMENT TREASURIES IN INDIA, 1868-70 COMPARED WITH PREVIOUS YEARS.

	May.	June.	July.	August.	October.	November.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Government of India.....	1,11,67,685	1,13,96,108	1,52,48,515	1,36,15,865	1,47,55,375	1,81,59,728
Bengal.....	1,37,91,214	1,49,61,970	1,28,40,478	1,12,23,907	1,28,30,478	1,21,74,892
Burmah.....	37,54,864	27,50,490	28,44,728	33,10,450	41,59,849	86,45,387
North-Western Provinces.....	2,05,84,544	2,41,33,186	2,33,69,426	2,14,9,9002	1,62,06,179	1,96,74,077
Oudh.....	47,80,982	63,08,804	62,19,612	68,75,649	36,55,325	47,42,276
Punjab.....	89,94,786	1,14,40,931	1,17,81,282	1,08,06,985	83,31,388	92,46,874
Bombay.....	8,73,42,836	3,39,55,116	3,05,08,255	2,35,10,012	1,83,78,648	1,83,07,681
Central Provinces.....	66,53,284	68,20,440	68,53,108	61,53,058	86,31,696	56,02,447
Madras.....	2,69,32,294	3,04,71,972	3,07,96,345	2,76,09,862	2,43,76,457	2,56,50,416
Total.....	13,63,02,461	14,22,29,014	14,00,50,689	12,29,02,765	10,73,16,388	11,75,13,672
1867-68.....	11,49,73,104	11,62,04,798	11,00,92,380	9,63,10,342	7,89,69,848	7,15,22,403
1868-69.....	11,73,38,501	11,81,90,260	10,94,54,805	10,02,49,304	7,04,14,121	8,14,11,652

## SILVER RECEIVED AND COINED IN THE MINTS OF CALCUTTA, MADRAS, AND BOMBAY, 1869-70

	CALCUTTA.			MADRAS.			BOMBAY.		
	Bullion or Coin received during the month valued in Rupees.		Coined and examined during the month valued in Rs.	Bullion or Coin received during the month valued in Rs.		Coined and examined during the month valued in Rupees.	Bullion or Coin received during the month valued in Rupees.		Coined and examined during the month valued in Rs.
	Govt.	Merchants.		Govt.	Merchants.		Govt.	Merchants.	
June.....	1,148	24,650	10,88,778	..	14,509	..	18,577	14,07,061	22,11,376
July.....	1,201	2,722	9,30,351	..	3,594	..	88	1,03,558	26,51,675
August.....	66,565	2,020	..	..	644	..	..	43,631	11,23,838
September.....	89,122	3,28,445	..	..	..	..	40,524	49,655	8,28,685
October.....	8,487	2,12,373	..	..	8,908	..	8,241	1,02,243	1,53,625
November.....	520	59,349	..	..	3,806	..	1,44,504	92,117	..

## STATEMENT of the amount of INDIAN GOVERNMENT CURRENCY NOTES in CIRCULATION, of the amount of COIN AND BULLION RESERVE, and of the GOVERNMENT SECURITIES held by the Department of Issue of Indian Paper Currency

Date.	Circles of Issue.	Balance of Issue Account.	Retired by other Offices of Issue	Currency Notes in circulation.	Silver Coin Reserve	Silver Bullion Reserve	Gold Bullion Reserve	Reserve in Government Securities	Total Reserve.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
30th Nov. 1870	Calcutta	3,53,89,120	75,340	3,53,18,880	1,37,99,590	36,08,488	3,12,495	1,18,20,987	2,95,41,560
Ditto	Madras	96,20,730	3,29,120	92,91,610	55,78,586	..	..	17,28,404	73,06,970
Ditto	Bombay	4,11,58,070	42,240	4,10,90,730	2,45,40,699	9,15,371	..	1,31,49,860	3,96,06,930
Ditto	Allahabad	74,14,960	37,48,360	36,66,600	32,54,189	..	..	11,03,291	73,47,480
Ditto	Lahore	44,08,340	20,94,220	23,15,120	36,53,663	..	..	7,00,037	43,53,700
Ditto	Calcutt	14,70,470	6,29,410	8,41,060	12,26,181	..	..	1,00,070	13,26,440
Ditto	Trichinopoly	18,21,550	15,67,740	2,53,810	16,25,631	..	..	1,00,659	17,23,090
Ditto	Vizagapatam	5,05,830	1,35,830	3,70,000	3,11,611	..	..	1,00,059	4,11,570
Ditto	Nagpore	45,90,380	1,21,750	44,68,630	40,41,068	..	..	5,47,902	45,98,970
Ditto	Kurrachee	47,68,390	23,77,850	24,90,540	42,41,064	..	..	5,00,106	47,41,170
Ditto	Akola	27,95,470	1,45,250	26,40,220	27,84,470	..	..	..	27,84,470
	TOTAL	11,39,09,360	1,11,67,210	10,27,42,150	6,80,55,082	45,23,869	3,12,495	2,95,50,784	10,27,41,500

Calcutta, Department of Issue of Paper Currency  
6th December 1870.E. F. HARRISON,  
Head Commissioner

## STATEMENT showing the Amount of each kind of CURRENCY NOTES of the BOMBAY CIRCLE in circulation on the 31st day of December 1870.

Date.	Denomination of Notes.						Total Value.
	10 Rs. Value.	20 Rs. Value.	50 Rs. Value.	100 Rs. Value.	500 Rs. Value.	1,000 Rs. Value.	
1870							
15th Dec.	27,32,760	15,02,500	20,79,100	55,77,700	22,46,500	2,68,59,000	4,11,47,560
31st Dec.	27,12,550	14,75,000	20,28,000	54,09,300	22,61,000	2,71,76,000	4,10,55,910

A. R. GORDON,  
Assistant Commissioner of Paper Currency.





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**COLONIAL AND FOREIGN ASSURANCES.**

An Amalgamation having been formed between the STANDARD LIFE ASSURANCE COMPANY and the COLONIAL LIFE ASSURANCE COMPANY, the business of the United Companies will henceforth be conducted under the title of

**The Standard Life Assurance Company.**

THE ANNUAL REVENUE of the Standard Company is now upwards of £260,000, and the Accumulated Funds amount to upwards of £2,300,000 sterling. The New Business transacted during the past year amounted to the large sum of £1,878,000 sterling, the corresponding premiums amounting to £45,347 per annum. MODERATE RATES charged for residence in the Colonies, India, and other places abroad.

LOCAL BOARDS and AGENCIES in India, and in all the British Colonies where every facility will be afforded in the transaction of business, and where Premiums may be received and claims paid.

Immediate reduction of Premium on return to Europe, or other temperate climates, without Medical Certificates.

DivIDENDS divided every five years.  
The New Colonial and Foreign Prospectus may be had on application at the Chief Office of the Company, or to the Agents at home or abroad.

WILL. THOS. THOMSON,

Manager and Secretary.

D. CLUNIE, Esq.,  
Colonial and Foreign Secretary.

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H. FROST, Esq. W. NIXON, Esq.  
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AGENTS IN BOMBAY.

The London, Asiatic and American, Com[pany] (Limited).

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ATTENTION is respectfully invited to the following facts:—  
1. The School is situated in a healthy, airy, and pleasant position, and is surrounded by a large and fertile field, which is well watered. 2. There is a large and well qualified staff of teachers, including a Classical Master (B. A. in Classical Literature, Cambridge) and a resident Headmaster. 3. At the examinations of the College of Preceptors and the Oxford and Cambridge Universities, Pupils from the School have taken Honours in several distinct branches of Education. 4. Latin, French, Mathematics, Book-keeping, and English. 5. At five examinations by the College of Preceptors, Certificates were awarded to one-third of all the Pupils in the School. 6. At five out of seven Examinations by the College the highest place in Book-keeping was given to candidates from this School. 7. The Principal earnestly endeavours to form in his Pupils a manly Christian character. 8. The Diet is liberal. 9. Fees, which are moderate and incentive with lists of successful pupils, on application.

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The Proprietors have received the cordial support of the leading India, China, Australia, and American Houses; and the private information derived from these sources cannot but add immensely to the intrinsic value of the publication in addition to the business done in the various Produce Markets in London. "The London Daily Reporter" embraces the Provincial and Foreign Intelligence received from hour to hour in London by Telegraph, and the value of its Market Reports consists in their authenticity and absolute correctness, as they are supplied by houses of the highest standing in each department of business.

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**AGENTS IN ALL PARTS OF THE GLOBE.**

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GEORGE W. WHEATLEY & Co., are Sole Agents in Western India for the following firms:—

Gillards (Patent) .....	ABBOTT & NICHOLL .....	Birmingham.
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Sole agents of Watches, Jewellery, &c., the new on hand. Consignments of choice Wines, Printing Presses, and Ink, Printing Paper, Sewing Machines, &c., are daily expected.

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**ALLIANCE BRITISH & FOREIGN LIFE AND FIRE ASSURANCE COMPANY.**

Established 1825.

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Hugh Colin Smith, Esq.  
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**Fire Risks**

Of an eligible character are accepted at minimum current rates.

**Life Department.**

The non-participating rates of premium for European lives resident in India have been very materially reduced, and the undermentioned Agents are authorised to decide upon Proposals submitted, to issue Policies, and to settle claims.

The Life Reserve Fund is over

**NINETY FOUR LACS OF RUPEES**

(which is irrespective of and in addition to the paid up capital and the Fire Reserve Fund), being about 80 per cent of the sum assured under the Company's Life Policies, and besides this there is the guarantee of a subscribed Capital of not less than

**FIVE CRORES OF RUPEES,**

coupled with the personal responsibility of a numerous body of wealthy Proprietors. For detailed Prospectuses, forms of Proposal, &c. apply to

**REMINGTON & Co.,**

Agents for the Presidency of Bombay.

**THE MADRAS EQUITABLE ASSURANCE SOCIETY.—**

Successor to Madras Laidlaw Society, Established in 1839.

Regulated by Act No. 6 of 1869, of the Legislative Council of Fort Saint George. Head Office in Madras and no Branches.

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R C. WALKER, Esq. . . . . (O. Shand & Co.)

**ACTING MEDICAL EXAMINER.**—W. H. HARRIS, Esq., M. D.

**SECRETARIES AND TREASURERS.**—Messrs ARBUTHNOT & Co.

The Chief characteristics of this Society are —

Mutual Assurance  
Policies for a term of years issued at reduced rates, without participation in Surplus.

Premiums payable half yearly, on 1st January and 1st July.

Claims paid immediately after satisfactory proof of death. Announcement of death in the Fort Saint George Gazette, sufficient in the case of the members of the Civil and Military Services.

Medical fees paid by the Society on all proposals.

Policies issued free of charge for Stamp Duty.

Assurances may reside in any part of the World, so long as they continue to pay the original rate of Premium stipulated in their Policies.

This Society being founded on the sound principle of Mutual Assurance, divides all its Surplus, or so much thereof as the Directors deem expedient, amongst the Members, or Life Policy Holders, by deductions from Premiums, and does not work for the benefit of a separate Proprietary body.

The Members of the Society consist of all persons who hold Policies of Assurance, upon their own lives, or upon the lives of others, for the duration of life.

The Directors must be residents at Madras, and are elected by the Members.

The Society's funds can be invested only in Securities of the Governments of India, or in Securities, the interest of which is guaranteed by the Government of India, or by the Secretary of State for India in Council.

All investments are made in the joint names of three of the Directors.

Annual General Meetings of the Members are held at Madras, not later than the last day of the month of March in every year.

An Annual Audit is made of the accounts of the Society, and the reports of the Auditors submitted at the Annual General Meetings.

Quinquennial valuations, made by a London Actuary, of all the Assets and Liabilities. The next valuation will be made as from 31st December 1870. Premiums paid on Policies for the whole term of life during any portion of the period of five years immediately preceding that date, will entitle the Holders of such Policies to participate in the surplus of the Society then ascertained to be existing, by rateable deduction from Premiums then payable for the ensuing Quinquennium.

The returns made to the Policy Holders from the formation of the Society in January, 1842, up to June, 1869, inclusive, (in addition to the accumulation of a considerable Reserve), have averaged 47 per cent upon the Premiums paid half-yearly.

For further particulars, forms of proposal, &c. apply to

**ARBUTHNOT & Co.,**

Secretaries and Treasurers.

**Edinburgh Family Hotel, RIVER VIEW, SIMLA.**

Pleasantly situated in the most central part of the station, near the Church and Mall, and within easy distance of the Library, Club, and Assembly Room and entirely removed from the Bazaar.

The Proprietor solicits patronage, and begs to assure those who may engage accommodation at this establishment, that they will find no effort spared which can conduce to their comfort.

Rooms available for Private Families by the season, month, or day. Early application necessary. Address.

**THE PROPRIETOR,**

Edinburgh Family Hotel, Simla.

Simla, 21st January 1870.

**MRS. BIRCH'S SCHOOL, Woodbine Lodge, Nynce**

TAL.—A few vacancies for Boarder Pupils.



## THE BOMBAY FIRE INSURANCE COMPANY, LIMITED

THE undersigned are prepared to ACCEPT RISKS and  
FIRE POLICIES covering Merchandise Goods in Godowns, Warehouses,  
Dwelling Houses, or other insurable property, on favourable terms. Apply to

FORBES & Co.,  
Secretaries and Managers.

Bombay, 1st December 1870.

## ROWLAND &amp; CO.,

## SADDLERY &amp; HARNESS ESTABLISHMENT

No. 8, Maffra Street, Fort,

ALL orders will be promptly attended to and carefully executed. Orders from outstations must be accompanied by a remittance or reference for payment in Bombay.  
R. & Co., solicit especial attention to their own Composition for Softening Leather

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Established, January 1868.

ATTENTION is confined to business strictly connected with that of Wholesale and Retail Chemists and Druggists; and by means of our connection with eminent Foreign and English manufacturers and importers, we claim to be able to supply Drugs and Chemical Preparations of the first quality at the most remunerative prices.

We are the Sole Importers of the celebrated

## Gua Powder,

a medicine whose extraordinary curative powers in Parasitic Ringworm is renowned throughout the Torrid Zone.

Our well-known preparation of

## Liquor Chiretides,

has been written of by medical authorities as a Tonic and Vehicula of remarkable power. It is the only preparation extant which produces the precise therapeutic effects of the herb chiretia, being a solution of its active principle Chiretinum.

In Muscular debility it is unsurpassed by any other remedy.

We are Sole Agents in India, for the Patent Extract for preparing

## Liebig's Milk,

By the London Infants' Food Society.  
A preparation which, since its introduction into this country, has, we are assured by parents, saved many infant lives.

## Medicine Chests

are the objects of our unremitting attention. Having very large experience of the wants of residents in India, we believe we can meet a greater variety of requirements in this respect than any other house. A new edition of Kemp's Medicine Chest Companion is now in preparation.

Preparations which have obtained celebrity, and are

prepared only by us

Liebig's Nutritive Extract Liquid  
Ros Alpinus for Prickly Heat.  
Tonic Restorative.  
Aromatic Distillate for Aleret cup

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Ever Mixture and Fever Drops  
Corroborative Drops

—Soda and other Aleret Water in all their modifications by powerful machinery.

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Es. Gandary,

F. HARLEY & Co.

## Waterproof Military Ground Sheets,

REGULATION SIZE.

F. HARLEY & Co.

## Patent Improved Tarpaulins

OF SIZES ALWAYS IN STOCK

F. HARLEY & Co.

## Improved Patent Tarpaulins,

## PREPARED ON ENGLISH CANVAS ONLY, guaranteed

Free from Adhesiveness either in sun or rain; finished expressly for use in hot climates; no Tarred matter is used in our composition, which is perfectly pliable and free of all spontaneously combustible matter. Our tarpaulins with ordinary usage will last for years. The Arsenal Fort William, has tested and found them all that we describe, and in addition Proof against Salt Damp and white Ants.

Assorted sizes always in Stock.

All Tarpaulins made by us are branded

F. HARLEY & Co., Makers, Calcutta.

## F. HARLEY &amp; Co.,

OIL, COLOR, SOAP, AND TALLOW MERCHANTS,  
IMPORTERS OF COLORS, PAINTS, VARNISHES, CAN-  
VAS, &c., &c.,

16A, Leil Bazar, opposite the old Sashoi's House, Calcutta.

RAILROAD AND STEAM NAVIGATION STORES.

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Civil, Naval, and Military Tailors, and General Outfitters

46, Edgware Road  
London.

8, Old Court House,  
Calcutta.

## HOPE HALL FAMILY HOTEL,

Madras, Bombay.

THE HOPE HALL FAMILY HOTEL has been greatly improved and enlarged, and a few single detached buildings erected in the compound. As these additions are in the comfort and privacy of families, the Proprietors respectfully beg that orders be sent in time by persons wishing to occupy them.

The Proprietors presume that it is hardly necessary to say that this Hotel offers greater advantages to the public than any other in this city, not only on account of its being nearest to the P. and O. Company's Pier at Madras, and near enough to other landing places and the several Railway Stations, but because it has a spacious and beautiful compound, nicely cultivated, and intersected by broad and well-kept walks.

For the amusement and recreation of guests it has Billiard rooms, entirely detached from the other buildings in the compound, where also excellent refreshment may be obtained.

The Table and Wines are unrivalled. Horses and Carriages are always to be had on the premises.

ROBERT FRANKLIN & Co., Proprietors.

## MESSRS. KING, SUGDEN &amp; Co.,

## BRASS AND IRON FOUNDERS,

## ENGINEERS, BOILER MAKERS, AND GENERAL WORKERS,

## PERSEVERANCE FOUNDRY,

No. 30, UPPER DUNCAN ROAD, BOMBAY.

BEG most respectfully to inform their Friends in Bombay, and out-stations, that they are prepared to execute orders to any extent for Iron, Brass Casting and any other kind of Engineering works. &c. &c. have on hand, for sale a quantity of Stationary Engines and Moulds of sizes, together with saw Benches with saws. They have for sale or for hire 4 Portable Engines, with Centrifugal Pumps and a large quantity of other Machinery.

## NEW BANK OF BOMBAY, Limited.—Capital Rs.

100,00,000, divided into 20,000 Shares of Rs. 500 each. First issue 10,000 Shares of Rs. 500 each—Rs. 5,00,00,000 paid up. Resolved issue 10,000 Shares of Rs. 500 each, on which Rs. 100 per share have been paid.

## DIRECTORS.

A. J. Macdonald, Esq., (of Mr Charles Forbes & Co.)  
Captain G. F. Heny  
R. Valentine, Esq., (of Messrs Finlay, Scott & Co.)

Dinshaw Manockjee Petit, Esq.  
Ahmedbhai Habbibhai, Esq.  
Kessowjee Naik, Esq.  
E. D. Sassoon, Esq.

## SIXTH REPORT.

The Directors beg to submit to the proprietors the audited accounts for the half year ended 1st December last.

The period was marked by a war raging on the Continent of Europe so loudly affecting the commerce of the world, and thus inflicting a heavy loss on all persons. There was little enquiry for money, and the conduct of business was attended with unusual risk. The trade of the port was passing through a severe trial, from which it still suffers.

Branches have recently been opened at Coompta and Madras without result hitherto as might have been anticipated in such a season, but the Directors considered it desirable to occupy the ground, and they are satisfied that the result will be eventually satisfactory.

The balance sheet, including the sum brought from last half year, shows a net profit of Rs. 1,70,124-11, and out of this amount the Directors, in accordance with the Articles of Association, have declared an interim dividend at the rate of five per cent per annum.

This will absorb Rs. 1,50,000, leaving a balance of Rs. 20,124-2-11 to be carried forward.

Had debts to the extent of Rs. 4,58,600, have been made during the half year, and have been written off.

The Directors beg to state that they have received no information from the Government of India regarding the proposed Bank of India.

The Directors of the Bank have started a Guarantee Fund with the sanction and approval of the Directors, who at the next General Meeting will submit resolutions for adoption by the shareholders in recognition and furtherance of the scheme. The plan of the Bank which is based on a relief to the officers and an advantage to the Bank.

The report of the Auditors is annexed.

By order of the Board of Directors.

M. BALFOUR,

Secretary and Treasurer

Bombay, 16th January 1871

## AUDITORS' REPORT FOR THE HALF YEAR ENDED 31st DECEMBER 1870.

THE DIRECTORS NEW BANK OF BOMBAY, LIMITED

GENTLEMEN.—The following is the result of our audit of the Books and Accounts of the Bank for the half year ended 31st December 1870:—

1. We have compared the General Ledger balances with those in the Balance Sheet, and we have found them to agree. We have examined the charge Registers and the various books and documents available for checking the balances in the General Ledger, and have found them in order.

2. We have examined the securities deposited with the Bank for safe custody, and we have found them to correspond with the securities lodged with the Bank.

3. We have examined the Government Securities (Treasury Bills) deposited with the Bank, and we have found them to correspond with the securities lodged with the Bank.

4. We have examined the Government Securities (Treasury Bills) deposited with the Bank, and we have found them to correspond with the securities lodged with the Bank.

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25. We have examined the Government Securities (Treasury Bills) deposited with the Bank, and we have found them to correspond with the securities lodged with the Bank.

Bombay, 16th January 1871

Yours most obedient servants,  
G. MANSON,  
BAGROO NATH KARAYEN, Auditors.

# THE Indian Economist.

A Monthly Journal devoted to Economic and Statistical Inquiries concerning India.

Vol. II.]

CALCUTTA, WEDNESDAY, 15TH FEBRUARY, 1871.

No. 7.

## Advertisements.

### OVERLAND ROUTE.

THE Peninsular and Oriental Company book passengers and receive Cargo and Parcels by their Steamers for—

Aden .....	From Bombay every Saturday at 5 P. M.
Suez .....	
Brindisi .....	
Malta .....	
Gibraltar .....	
Southampton .....	
Calcutta .....	Thursday, the 22nd December, and every
Madras .....	alternate Thursday thereafter at noon.
Panama .....	
Singapore .....	
Batavia .....	
Hong Kong .....	
Shanghai .....	
Japan .....	
King George's Sound .....	Thursday, the 22nd December, and every
Melbourne .....	fourth Thursday thereafter, at noon.

Cargo can also be booked through to Trieste, Odessa, Naples, Venice, Genoa, Barcelona, Havre, London and Liverpool. A considerable reduction has been made in the Tariff of charges for small parcels to England.

For further particulars apply to  
GEORGE F. HENRY,  
Superintendent.

P. & O. S. N. Co.'s Office, 3, Rampart Row, Bombay.

### AUSTRIAN LLOYD'S STEAM NAVIGATION CO.

MONTHLY LINE OF STEAMERS BETWEEN BOMBAY AND TRIESTE, VIA SUEZ CANAL.

THE Company intends to despatch every month a Steamer from TRIESTE to BOMBAY, and vice versa.

#### PASSENGER RATES FROM BOMBAY.

	Cabin.	Deck	without food.
To Aden .....	£ 18	.....	£ 6-15
To Suez .....	28	.....	11-15
To Port Said .....	30	.....	12-10
To Trieste .....	40	.....	18-10

Cargo taken for Trieste, Venice, Constantinople, Odessa, Aden, Egypt, England, and the Continent generally.

There is also a weekly service by MAIL STEAMERS between Alexandria and Suez, in connection with the P. & O. Co.'s Mail Steamers from and to Suez. The Austrian Lloyd's Mail Steamers leave Alexandria direct for Trieste immediately after the arrival of the P. & O. Co.'s Mail Steamers. The distance between Alexandria and Trieste is 306 miles, less than that between Alexandria and Marseilles, and the voyage to Trieste is a more agreeable and a coasting trip, full of variety of beautiful scenery. The passage occupies only 4 1/2 days, and the Company's best steamers are employed on this line, which are built expressly for this service, with especial regard to the accommodation and comfort of passengers, and have each an experienced surgeon on board. At Trieste the traveller to England has an extensive choice of picturesque and interesting routes, occupying from three days six hours to five days to London, at an expense varying from £7 to £13.

Passengers by the P. & O. Co.'s steamers to Suez can have their baggage forwarded by that Company's steamers to Southampton, at a charge of 10s. per cwt., to which the Austrian Lloyd's Agent at Suez will attend.

The undersigned Agents grant also passage tickets for the steamers plying between Alexandria and Trieste, and for the railway between Suez and Alexandria.

#### PASSENGER RATES FROM ALEXANDRIA TO TRIESTE.

FIRST CLASS ..... £13 | SECOND CLASS ..... £9  
Children under 10 years at HALF FARE; under 3 years, FREE.  
REDUCED FARES FOR FAMILIES, consisting of not less than 3 adult travellers travelling together—FIRST CLASS, £10-16 per head. SECOND CLASS, £7-10 per head.

Railway Tickets, from SUEZ to ALEXANDRIA, with all the privileges of passengers by the P. & O. Co.—FIRST CLASS, £3; SECOND CLASS, £2; CHILDREN over 3 and under 10 years at HALF FARE.

In conjunction with Austrian Lloyd, Cargo for Trieste and Venice can be booked through from Bombay by the P. & O. Co., and the Bombay and Bengal Steam Ship Co., and via Suez from the various ports touched at by the steamers of the British India Steam Navigation Company.

#### TRANSHIPMENT SERVICE AT PORT SAID.

Goods for Trieste, Odessa, and ports on the Syrian, Turkish and Greek coasts, shipped on steamers under any flag whatever from Japanese, Chinese and Indian ports, bound to Mediterranean or British ports via Suez Canal, are received, transhipped by the Austrian Lloyd's Agent at Port Said, and forwarded to their destination by the Company's regular lines of steamers.

For further particulars, and for freight and passage apply to  
A. C. GUMPERT & Co.,  
Agents for the Austrian Lloyd.

Bombay, 3 Ash Lane.

### STEAM COMMUNICATION WITH KURRACHEE.

THE British India Steam Navigation Company (Limited), UNDER MAIL CONTRACT WITH GOVERNMENT, and in connection with the weekly service from England, despatch a steamer to KURRACHEE every Monday at noon.  
Bombay, 1870. W. NICOL & Co., Agents.

### AUSTRIAN LLOYD'S STEAM NAVIGATION COMPANY.

IN Addition to the Monthly-Line of Steamers between BOMBAY and TRIESTE, the Company have resolved upon establishing a transhipment service at Port Said for goods shipped for Trieste by steamers sailing under any flag whatever, from the Japanese, Chinese, and Indian Ports to Mediterranean or British Ports via Suez Canal. Merchants and Shippers, who avail themselves of this mode of conveyance, are respectfully requested to address such goods to the Austrian Lloyd's Agency at Port Said, which will care for their transhipment upon and forwarding by the Company's weekly steamers running between that port and Trieste, via Alexandria, charging the following rates of freight:—

Cotton, Wool, Skins, Tea .....	24 shillings per ton of 40 Eng. c. ft.
Indigo, Silk .....	60 " " 20 cwt.
Gum, Resins, Castles, Pepper, Oil-Seed, Ginger, Rice, Oils, &c 40	" " 20 cwt.

Inclusive of transhipment expenses, as also of eventual charges for disembarkment, storing and re-embarkment. On the above rates a reduction of 10s. per ton of 20 cwt. is allowed when goods are received and embarked at Port Said by any other medium than that of the Lloyd's Agency.

The Company undertake, at Merchants' request, the Insurance against Sea risks the following premium per cent. List:—

From Port Said to Trieste 8 shillings from 1st of April to 30th September.
10 " " 1st of Oct. to 31st March.

Goods for Odessa and ports of the Syrian, Turkish, and Greek coasts touched at the Company's steamers, will also be received and forwarded at the above rates of freight.

By order of the Board of Directors,  
Trieste, 15th February 1870.  
Bombay, 23rd March 1870. Agents of the Austrian Lloyd's N. & Co.

### STEAM COMMUNICATION WITH ITALY, VIA SUEZ CANAL.

MESSRS. R. RUBATTINO & Co.'s Italian Mail Steamers are running between GENOA and BOMBAY, calling at ANCONA, NAPLES, MESSINA (occasionally ALEXANDRIA), PORT SAID, SUEZ, ADEN and via Suez.

The next steamer of the above Company leaving this port will be the newly English-built Steam-ship "INDIA," 2,500 tons—by Captain Donato, with superior accommodation for 1st, 2nd, and 3rd Class Passengers. She is expected to arrive by the end of January, and will consequently be despatched within the 2nd or 3rd week of February 1871.

More precise information regarding her departure will be given on her arrival.

#### PASSENGER RATES.

INCLUSIVE OF ALL TRANSIT FEES THROUGH THE SUEZ CANAL.

	1st Class.	2nd Class.	3rd Class.	
To Aden .....	223	215	24	
" Suez .....	36	22	8	
" Port Said .....	38	24	9	
" Alexandria .....	39	25	9-10	
" Messina .....	46	32	13	
" Naples .....	47	33	13	
" Leghorn .....	50	34	14	
" Genoa .....	50	34	14	
" Marseilles (transshipment at Genoa) 53	55	35	14-10	

Children under 3 years, free of charge. Children not above 10 years half fare.

Passengers are allowed to break the voyage at any of the above named Mediterranean ports, and are free to resume it by any of the Company's steamers to the port of destination marked on their tickets.

Passengers returning within six months of their departure from Bombay by the steamers of the Company, are entitled to a reduction of 50 per cent. on the return fare.

Berths may be secured in advance by depositing half the Passage Money.

For prospectus, rates of freight, and further particulars, apply to

Bombay, 18th December 1870. Agents, R. RUBATTINO & Co. (Limited).

### STEAM COMMUNICATION WITH THE PERSIAN GULF, VIA KURRACHEE.

Interchanging Cargo and Passengers at Bussora, to and from Bagdad, with the Australian and Tigris Steam Navigation Company.

THE British India Steam Navigation Company (Limited), UNDER MAIL CONTRACT WITH GOVERNMENT, will despatch a steamer every 14 days to the PERSIAN GULF, touching at KURRACHEE, GUADERA, MOSCOW, BUSSORA, ADEN, LORAN, BUKHARA, P.O. MATRUH and BAHIGAH.  
Bombay, January 1870. W. NICOL & Co., Agents.

### STEAM COMMUNICATION WITH THE MALABAR COAST, CEYLON, MADEAS, AND CALCUTTA.

THE British India Steam Navigation Company (Limited), UNDER CONTRACT WITH GOVERNMENT, despatch steamers as above with Mail, Passengers, and Cargo, every fourteen days.

This route is the most expeditious and economical for passengers for the Nalgerry district, Bangalore and Madras, who can land at Calicut for Beypore, and proceed from thence by rail.

Passengers for Calcutta can take the same route, picking up the steamer at Madras.

Bombay, January 1870.

W. NICOL & Co., Agents.



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PHARMACEUTICAL CHEMISTS, BOMBAY.

Established, January 1868.

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**C. LAZARUS & Co.**, as Manufacturers, invite particular attention to their large stock of full-size Billiard Tables, the cushions of which are constructed on an entirely new principle, similar to those supplied by C. L. and Co. and now in use at the Bengal Club, and in most of the Clubs and Messes of the three Presidencies

**CONSEQUENT** on the numerous applications that **C. LAZARUS & Co.** have lately had from parties residing at a distance from Calcutta to have their Billiard Tables re-cushioned on C. L. & Co.'s new principle, and as sending the old Cushions to Calcutta for that purpose is attended with great inconvenience, C. L. & Co. have been enabled to supply their new principle always on hand, without the necessity of the length and width of the Slate Bed only being required

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In accordance with their established practice of introducing novelties to the Indian public, **C. LAZARUS & Co.** have pleasure in announcing that they have made arrangements to supply the latest novelty in social and family amusements by importing the popular **B. B. B. Tables**. The peculiarity of these is that on the one table the favourite games of Billiards, Bagatelle, and Bagatelle may be played, thus affording a pleasing variety of amusement concentrated on a single board at little more than the cost of one. Anticipating that the demand for these tables will be large, C. L. & Co. are prepared to supply them on very favourable terms, being a principle of their business to furnish the best and most approved articles of every kind, at the lowest rates consistent with excellence of quality and a fair trading profit.

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| 2 Sleeping Suits .....           | 3 doz. Linen Collars.          |
| 3 Flannel Shirts .....           | 1 Halfway Portmanteau          |
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The Work is liberal. 9. The School is a boarding school, and is open to the admission of day pupils. 10. The School is a boarding school, and is open to the admission of day pupils. 11. The School is a boarding school, and is open to the admission of day pupils. 12. The School is a boarding school, and is open to the admission of day pupils. 13. The School is a boarding school, and is open to the admission of day pupils. 14. The School is a boarding school, and is open to the admission of day pupils. 15. The School is a boarding school, and is open to the admission of day pupils. 16. The School is a boarding school, and is open to the admission of day pupils. 17. The School is a boarding school, and is open to the admission of day pupils. 18. The School is a boarding school, and is open to the admission of day pupils. 19. The School is a boarding school, and is open to the admission of day pupils. 20. The School is a boarding school, and is open to the admission of day pupils. 21. 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# THE Indian Economist.

A Monthly Journal devoted to Economic and Statistical Inquiries concerning India.

Vol. II.]

CALCUTTA, WEDNESDAY, 15TH FEBRUARY, 1871.

No. 7.

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## THE GERMAN PRESS ON THE CHANGE IN ENGLISH SYMPATHIES.

"My friend, if thou hadst all the artillery of Europe trundling at thy back, in support of an unjust thing, and infinite bonfires visibly waiting ahead of thee to blaze centuries long for thy victory on behalf of it, I would advise thee to call halt, to fling down thy baton, and say, "In God's name, No!" Thy 'success'? Oor devil, what will thy success amount to? If the thing is unjust, thou has not succeeded; no, not though bonfires blazed from north to south, and bells rang, and editors wrote leading articles, and the just thing lay trampled out of sight to all mortal eyes an abolished and annihilated thing. Success? In a few years thou wilt be dead and dark,—all cold, eyeless, deaf; no blaze of bonfires, ding-dong of bells, or leading articles, visible or audible to thee again at all for ever. What kind of success is that!" (*Past and Present*)

THE *Allgemeine Zeitung*, of 12th January, "complains that the change in English sympathies is founded on a great lie. John Bull has not changed his sympathies, for the simple reason that he has not, and never had, any either for France or for Germany. He is easily persuaded, and desires to be confirmed in the notion by daily repetition, that he supported the Germans with his precious sympathies as long as they carried on a defensive war, and thereby gave striking proof of his virtue and love of justice; but that, for the same reason, he must now transfer all his good feelings and will to France, since the defensive war has been turned into one of aggression and conquest. Far still higher than the feelings of the heart he values liberty, which, as he easily persuades himself, exists in the world only in so far as it is protected and furthered by English sympathies. It is a pressing necessity for humanity and for England that France

should be great and free. France represents the free, and Prussia the despotic, principle; the former represents republican virtue, the latter military arrogance. In short, the love of liberty, which has struck such deep root in the English people prevents them from continuing to sympathise with the German side. It would be lost labour to disprove such false statements by arguments. . . ."

We may properly remind our German contemporary that there are Englishmen who have shewn no change of sympathies throughout this war, Englishmen who from the first pointed out the error into which their country was led by the conduct of the *Times*, through which the Prussian Minister had contrived to debauch the public opinion of England at its fountain head. There has been no change in the sympathies of those who have read the history of this war aright from its beginning, instead of being imposed upon by the delusion so sedulously propagated in the English press, that the Germans are a peaceful, non-aggressive race, anxious only to be let alone by their neighbours and forgotten in the bosoms of their homesteads and families. Look at the German boast in the very article from which we make this extract that Rome "has been conquered innumerable times since Alaric by the German armies." What was this peaceful, non-aggressive race doing there—these thousand times? Conquering there. On the whole, nations are astonishingly true to their national character, which indeed, as Carlyle says, "runs in the blood." German is by his very name *guerre-mien*, or man that wars and *garrs*. The German character is essentially selfish, unscrupulous, and aggressive. The very name German has become associated in history with the term "mercenary." We are familiar enough with the expression "mercenary German troops," but whoever heard of mercenary French, or mercenary English? It is always to Germany that England looks, as she did in the Crimea, for mercenaries, and were war to take place tomorrow between Prussia and ourselves, we could fill our armies with Germans by the mere offer of high pay. We do not say this to pain the German mind. It is a simple fact, that the individual German has not a very high sense of the sacredness of human life, and the guilt of unrighteous war. The history of Prussian hegemony in particular is a mere record of the most guilty, unscrupulous, and violent aggressions upon its neighbours. No well-informed German who may read these lines will deny the truth of our statement. By a course of unparalleled violence, perfidy, and oppression; by conduct base and despicable abroad, and by the stern repression of all freedom at home, the Hohenzollern family have at last reached the goal towards which they have been struggling, at the expense of honor, good faith, and conscience, for two centuries. The goal is at last reached, and the Prussian monarch places the bloody ensign of Empire on his brow, in the presence of two millions of famishing men, women, and children clad in the black garb of death. From the palace at Versailles, he advertizes the world—

"We, William, by God's grace King of Prussia [the old blasphemous of successful might] hereby announce that the German Princes and Free Towns having addressed to us a unanimous call [the result, oh King, of two centuries of bloodshed by thee and thine] to renew and undertake with the re-establishment of the German Empire the dignity of Emperor, which now for sixty years has been in abeyance [and should have remained so for ever more; at all events the Empire was never *thine* but by violence] and the requisite provisions having been inserted in the Constitution of the German Confederation, we regard it as a duty we owe to the entire Fatherland to comply with this call of the united German Princes and Free Towns, and to accept the dignity of Emperor.

"Accordingly, we and our successors to the Crown of Prussia henceforth shall use the Imperial title in all the relations and affairs of the German Empire and we hope to God [why, speak of God, oh king, that it may be vouchsafed to the German nation to lead the Fatherland on to a blessed future, under the auspices of its ancient splendour. We undertake the Imperial dignity conscious of the duty to protect with German loyalty the rights of the Empire and its members to preserve peace, to maintain the independence of Germany, and to strengthen the power of the people. We accept it in the hope that it will be granted to the German people to enjoy in lasting peace the reward of its arduous and heroic struggles within boundaries which will give to the Fatherland that security against renewed French attacks which it has lacked for centuries.] [What, oh king, about Poland, Italy, and Denmark. You want immunity for German crimes by destroying France their avenger?]

The continuance of the war on the ground that Alsace and Lorraine must be restored to Germany for the safety of its frontiers, violates the universal conscience of Europe. A home writer says well:—"If there must be a re-vindication of lost territories, let it be general and thorough; for, if general and thorough, it will leave no Prussia on the map of Europe. This mushroom Power, which prates about the necessity of restitution, and the wickedness of robbery, only became a kingdom in 1701. Prussia was a petty Margravate, an unconsidered obscurity, when France was a great, an enlightened, a polished, and an ancient nation. Restitution! By all means let there be restitution, searching and complete, and when it is finished, what will there be left for King William to reign over? Prussia is but another name for stolen provinces, for by fraud and force Prussia has waxed great. And this *parvenu* Power, this product of pitiless and perfidious spoliation, this nation, so strong in its selfishness, and so selfish in its strength, is to wreak her wrath without limit upon France, which, with all her faults, with all her foibles, and they are ineradicable, is notwithstanding still that generous and high-minded France, whose sword has often been drawn in defence of the weak, whose blood has been nobly shed for the downtrodden of the earth, and whose uplifted arm, whose heroic spirit, whose fiery indignation at the sight of wrong, have spoiled the schemes of the dynasties of Europe, and made tyrants tremble. We do not believe that the people of England wish to see France subjected to a wrong so foul without a protest. 'Liberals' of all parties should insist at least on a national protest against this European Power whose origin is of yesterday, and whose only right to a place in the map of Europe is based on successful robbery."

Vehement as this denunciation is, it is but the expression of righteous feeling. The misfortune is that it comes so late. The fact simply is that no one can be familiar with the facts of Prussian history, the course by which this Hohenzollern family has risen to Empire, without sharing this indignation, and an overwhelming desire to see the very name of Prussia blotted out of Europe. It was a most unhappy business that English sentiment was so led astray at the commencement of the strife from a traditional distrust of the French alliance and the French Emperor's ultimate views.

It is an injustice to the French nation to attribute this war to their desire to keep Germany disunited. It was not the unity of Germany in itself that France dreaded, but the appearance upon its borders of the portent of a Germany united under the most perfidious and aggressive power the world has seen since the Romans. Germany united and peaceful was what every Frenchman of character desired; Germany united and aggressive under the leadership of Prussia was a most just object of alarm, as the event has proved. Germany divided, and therefore weak, was a traditional object of French statesmanship, to which the French Emperor shewed himself superior, while, in return for the services rendered by him to the nation in 1866, the fallen Emperor met with nothing but provocation and insult. It is astounding that Englishmen so generally ignore the deadly provocation at last given by Prussia, in secretly attempting the Spanish throne by

a *coup-de-main*, in face of its slighted honour 18 months before that it would make no such attempt. We ought to have no difficulty in placing ourselves in the position—the stand-point—of the French nation. The truth is simply that we are very defective and slow in our sympathies as a nation. Had we been the neighbours of Prussia, we should have been just as much excited, alarmed, and irritated by her unscrupulous march to empire over her neighbour's rights as were the French people. Are we so blind as to forget our own jealous, irritable alarm at the United States, removed from us by the whole Atlantic? Englishmen ought to be familiar with the fact that the history of Prussia is unique in the world. It is a record of perfidy, violence, and unprovoked aggression from beginning to end. The attempt upon the Spanish throne was a deadly offence against the comity of nations, under the circumstances of the European position. Mr. Gladstone's statement that the foreign policy of Prussia has ever been brutal and unscrupulous, ought to have been made in the face of Europe instead of in the pages of a Review; and it is the vivid memory of the fact that every Cabinet of Europe was counting upon peace and longing for its continuance, except this infamous power, that has inspired the writings of the *Indian Economist* with so much bitterness. For ourselves, we would gladly see the whole might of England arrayed against her. Mark the fact, that were this Hohenzollern family blotted out of Europe tomorrow by the manifest judgment of God, the world would witness the event with awe, and the full conviction that its career of blood merited the judgment that had at last overtaken it. Why should we wait for that judgment to decide our convictions concerning this dynasty, when the record of its ambition, and violent aggressions upon its neighbours is an open book? The truth is, the career of the first Napoleon has served to divert European attention in the last half century from Prussian to French aggressions. The latter were but a casual phenomenon; the former have been the result of a settled, cherished policy from generation to generation. We find it impossible to bow down before the success of this most guilty family. Our whole nature rises up against it, and the very name of Prussia stinks in our nostrils for her selfish violence, blasphemous pretensions to piety, her falsehood, duplicity, and dishonour. We ask with the ancient prophet, "Can the Ethiopian change its skin, or the leopard its spots? Then may she who has been accustomed to do evil learn to do well." There is plainly perfect and complete accord between the Prussian and Russian Courts, and we fear that Europe has entered upon a long period of bloodshed and confusion. The English Cabinet, we believe, might have prevented the outbreak of this war, but not in the way most Englishmen suppose. When the disclosure was made in July that Prussia had been intriguing against France to place a Prussian prince upon the Spanish throne, Mr. Gladstone should have protested, in the face of Europe, in such terms against the outrage as would have compelled the Prussian Court to give France the satisfaction which she rightly demanded. There are times in the history of nations when the guarded language of diplomacy should give place to the unstudied language of an honest indignation. Mr. Gladstone would not believe at the first that Prussia really had been guilty of this new offence against the peace of the world; but when the fact was absolutely certain, he owed it to France, to ourselves, and to humanity, to denounce it in terms such as Cromwell would have used in the circumstances. Why did he not indignantly protest in July, against the "brutal and unscrupulous" conduct, which he denounced in October in the pages of the *Edinburgh Review*? Had the English Ministry been true to itself—true to the French alliance to which the nation owes so much—the Ministry would have put a brand upon these Prussian intrigues in the face of Europe that would not have been forgotten for a generation of years. Here was the real mistake of the English Ministry. It had not the courage to offend the English Court by openly branding the Prussian King for his dishonour.

## EDITORIAL NOTES ON THE WAR.

THE encounter of Marshal Prim would do a service to the age if they could be prevailed on to publish the correspondence which passed between Bismarck and the late Marshal concerning the candidature of the Hohenzollern puppet for the Spanish throne. Every effort has been made by the Prussians on the one hand, and the Parisians on the other, to damage the French Emperor, by the publication of the private correspondence of the Empire. Upon the whole, Louis Napoleon has come through the ordeal better than might have been reasonably feared. Let Bismarck's private correspondence now see the light in the same way, and the world will obtain a wholesome disclosure of what Prussian diplomacy means. The memory of Prim has nothing to fear; but it would be worth a king's ransom to get at the Prussian letters. M. de Miranda might attempt this task we think.

A MADRAS paper, distinguished for the general care and moderation with which it is written, declares in its Retrospect of the year 1870, that the war arose in the following way:—

"The head of the house of Hohenzollern, the now renowned King William III. of Prussia, allowed a member of his family, the Prince Hohenzollern Sigmaringen, to become a candidate for the Spanish throne, and the Prince's candidature was accordingly announced on the 8th June. This aroused the jealousy of France, and a strong remonstrance from the Court of the Tuilleries was the result, to which King William listened, and directed the withdrawal of his kinsman's candidature. The conduct of Prussia on the occasion was such as would have satisfied any power less ambitious and restless than France. But the ex-Emperor demanded that Prussia should guarantee that no Prince or King William's family or any Prince of Germany, should ever again become a candidate for the sovereignty of any other realm which might want a ruler. This insolent demand was too much for the pride of the Prussian monarch, and a dignified refusal to give any such guarantee was the consequence."

That so complete a travesty of the facts should be possible so soon after their occurrence is really incredible. We forbear to name the journal.

THE *Daily News*, which has been intensely partizan through out this war, tells us that its issue has handed over "the domination of the Continent to a Power which, whatever may be its educational and intellectual advantages, represents the old "monarchical and feudal system of Europe." It adds doubtfully "what hidden issues are still within the womb of the great revolution no man can as yet determine. \* \* \* We are willing to hope that a future, better, if less brilliant and adventurous than her past, awaits the Prussian nation "and monarchy, now that her great providential task of bringing about German unity is on the eve of accomplishment. If it were otherwise, Europe would have to stand on her guard against a possible enemy, as ruthless as France was, in its "most aggressive and ambitious moods, and far more steadfast."

A few years ago, we met the correspondent of this journal in Paris, and were very unfavorably impressed by the fierceness of his hostility towards the Empire. The truth we suspect is, that the *Daily News* has had for many years past somewhat close relations with the Mazzini school. The French and English Radical press between them have pulled down the Empire, and now stand face to face with the new Emperor Wilhelm, hardly knowing what to make of the situation. They might have learned from Mr. Buckle's estimate of the comparative civilization of the two peoples, that it was better for Europe that France should be in the ascendant than for Germany.

"VERY like self-defence to train hard for six months and then "propose something which is certain to create a row." The author of the squib upon the war, from which we quote this epigram, discerns clearly what most Englishmen still want eyes to see; that while every other Cabinet in Europe was bent upon peace, this base Prussian power was secretly making gigantic preparations for war; and that its attempt to carry the Spanish throne by a secret *coup-de-main*, was deliberate and premeditated and designed to bring on war. The effort of all parties to make a scapegoat of the fallen Emperor—to accumulate the guilt of the strife upon his head, will by-and-by excite only contempt and indignation. The Prussian Court with its usual cynical dishonesty, at first declared the war to be the personal act of the Emperor; and the *London Times*, which was in Bismarck's hands, got up the same cry in the home press, while the French in their extremity have been but too ready to seize upon the pretence, and declare themselves guiltless of all complicity in the strife. History will lay its guilt primarily upon the Prussian Court, and then upon the madness of the Parisian mob on the one hand, and the rooted deadly-hatred of France cherished these 60 years past in Germany on the other. France

gave no provocation to this war. The provocation came from the other side. The real significance of the Spanish intrigue has not yet fairly dawned upon the British mind.

THE *Saturday Reviewers* devote two columns and a half in one of their recent issues to a pompous eulogy of English munificence towards "the sick and wounded" of the nations at war, and complain with an affectation of offended susceptibilities, that "nations are moved by the same jealousies and suspicions as individuals," and that the spectacle of our unbounded wealth, and "of our capacity for giving," has irritated both France and Prussia. The gentleman who writes in this way should be allowed, however, to speak for himself:—

"The time has, it seems, arrived when it is necessary to review the position of the great English subscription which has been entered into for the sick and wounded in the present miserable war. Indeed we are not sure that a friendly but discriminating examination of the whole matter might not have been offered before this. First, we have to deal with the fact that we have a huge sum of £260,000 collected. This national offering has been given from the best and highest motives. The charity of the whole community has been invoked under the most sacred appeals, and the answer has been given with unstinted generosity. Corporal duties as well as private feelings have been addressed. The Church, in obedience to the Archbishop of Canterbury, has been called upon in several congregations. Local associations and energy have done their best; there is hardly one of our social and municipal corporations which has not taken up the work. Town councils, trade associations, mercantile bodies, regiments and ships' crews, have engaged in an amiable rivalry of beneficence. Above and beyond all this, the personal munificence of those who recognise the duty of ministering to the afflicted, in whatever shape the miseries of human life present themselves, has on no occasion been more widely or more largely poured out. We have scorned coldly to inquire, who is my neighbour? When we were told of the ghastly incidents of the war, and when we could not escape the fact of the most terrible sufferings afflicting at the same moment thousands and thousands of our fellow-creatures."

When we remember the wealth of the nation, and learn that the gift amounts after all to no more than £260,000, the *Reviewer* who enlarges upon it with the pomposity of a parish guardian holds the nation up to ridicule by not knowing what figures mean. It is necessary, it seems, to point out, that £260,000 represents a contribution of just 2d (two pence) per head of the people. The annual income of the nation estimated from the income tax returns and other data, is as follows:—

Annual Income of middle and upper classes ...	£ 490,000,000
Income of working classes ... ..	„ 325,000,000
	£ 815,000,000

Of these eight or nine hundred millions sterling annually accruing to the nation, it spends about seven hundred millions only, its annual savings being variously estimated at from £90,000,000 to £130,000,000 a year. To understand therefore what national contribution has really been, look at the following figures:—

Annual Income of the nation ... ..	£ 850,000,000
Annual Spending of the nation ... ..	„ 760,000,000
National Munificence ... ..	„ 260,000

In other words, we have made "the sick and wounded" a present of about one four-thousandth part of our annual income. To glorify the nation for a contribution of this order, is simply to cover it with ridicule. The poorest body of disseminators in the kingdom, the Wesleyan Methodists, contribute almost as much as this "munificent national gift" to their foreign missions every year. The amount is unworthy of the country. Instead of £260,000 the sum might reasonably have been expected to reach two millions, and even then would not bear to be talked about in the terms employed by the *Reviewer*.

THE correspondent of the *Times* at Versailles is in a delicate and difficult position. Required to associate with the Prussian leaders on terms almost of intimacy, he is still expected to be their impartial and fearless critic, although every line he writes is read in Versailles within a few hours of its being published in London. Upon the whole, Dr Russell has done well; perhaps as well as we could fairly have expected any man to do in a position so difficult. His letter of 19th December is curiously marked by the double purpose of a wish to glorify and flatter the Prussian monarch as the author of German unity, without betraying, while doing so, the interests of civilization, by deliberately approving what he has done. On the one hand he tells us that the Prussian "army is the creation, one may say, of the King, "and of the King alone. Its existence is due to him. For "four years he stood face to face with his people. They yearned for one object, but they would not, or did not, see how "and how only it could be attained. The King saw it clearly, "There was one way, which philanthropists might condemn, "statesmen dread, and philosophers despise; but to his eyes it

"was the sole way of giving to Germany that complete mastery and that absolute independence of all foreign interference and dictation which would enable her to become the great central power of Europe. It was force, brute force—if you will,—expressed by an army complete in all its parts, to be supplied by a nation, every man of which was trained to arms."

"For four years from 1861 to 1865 the King overcame opposition by the simple exercise of the royal prerogative, or by the might of the royal will depending for its full exercise on the use of the machinery he had in his grasp. And now he is in the heart of France, and sees the last enemy of German unity, if not at his feet, powerless to prevent his work. First he conquered his own people; next he smote the rival power of Austria; and eagerly accepting the rash challenge of his sole remaining foe, he rushed upon him with resistless force, and a captive Emperor and an army of 300,000 men in bondage attest the strength of the weapon he prepared and put into the hands of his generals." Dr. Russell is discreetly silent upon the guilt of the course which he describes, and says nothing of the duplicity, the perfidy, and the violence which marked its every step. He will not however, so far betray the interests of civilization as to leave the world in doubt as to what his private judgment upon this history really is. With more courage and honesty than courtiers in general are capable of, he concludes his letter thus:—"We are on the edge of a vast revolutionary torrent let loose by kings and statesmen. The landmarks of the past, the traditions of the last centuries vanish from our sight, and out of the midst of the deluge there rises a portentous figure armed and terrible, which is to be received as the Goddess of Peace, whose attributes are perpetual readiness for battle. The solitary of Wilhelmshöhe was not far astray when he prophesied a cataclysm if the nations would not agree to a Congress; and certainly he bore his part in opening the sources of the flood. What a prospect for the closing years of this wicked and bloody century! What a legacy to the future! No faith in treaties—mitrailleuses and rifled cannon, military service, iron-clad fleets,—the preparation for the millennium." It is not upon the "solitary of Wilhelmshöhe" who prophesied this cataclysm of the nations, and strove to prevent it by introducing an era of arbitration into European counsels, but upon the Court of Versailles—that the real guilt of this dreadful strife rests. "Perpetual readiness for battle and the arming of the manhood of all nations to the teeth." Such is the outcome of Bismarck's repression of all freedom in Prussia, and of the personal despotism set up by the ambition of the King. The same base power which a century ago by the partition of Poland plunged Europe into half a century of wars, in which millions perished by sword and famine, has now, by its dismemberment of Denmark, again launched the Continent upon a sea of blood. And because the German people are a phlegmatic race, who profess no love for war, although ever ready to plunge into it for greed, Englishmen are to forget the crimes of their leaders, and lay upon the shoulders of the mercurial Frenchman the guilt of this new and terrible complication, because he will dance to the music of the drum. No! The character of the German people but increases the guilt, while it masks the odiousness of the Prussian Court. The setting up of the German Empire in Europe means, so far as man can see, a century of confusion and bloodshed in Europe.

#### THE PERMANENT SETTLEMENT, BENGAL—VI.

##### IMPOSSIBLE.

"On a certain two-legged animal with feathers, it is said, if you draw a distinct chalk circle round him, he sits imprisoned, as if girt with the iron ring of Fate; and will die there, though within sight of victuals, or sit in sick misery there, and be fatted to death. The name of this poor animal is goose!"

Our last issue contained an able letter upon this subject from a gentleman signing himself "An Occasional Contributor to the *Englishman*," who, in fact, is a Bengal Civilian of standing, and as such very exactly informed of the position of the land question in those Lower Provinces. In the eyes of this gentleman the position is hopeless. Agreeing with us in almost every abstract proposition we advance concerning the land, and admitting the frightful evils of which the Cornwallis settlement has been the parent, and that in consequence of "its peculiar land laws, Bengal contributes less than its share towards the expenditure of the Empire." The only difference between us, we are told, lies in the fact that while we are of opinion that the work of Lord Cornwallis can still be undone, our correspondent maintains that "such a measure is for many, if not most, parts of Bengal practically impossible." And the writer proceeds to prove this by

statistics. He points out, for instance, that in the small district of Chittagong alone, there are 60,000 tennesures held directly from Government, while the extent to which the process of subinfeudation has gone may be estimated from the fact that "during the past year alone 14,992 permanent under-tenures were created." The general conclusion of all is—that while our "leading doctrine is valuable and true" enquiry itself, much more redress, is—impossible. May we venture to reply in the words of Carlyle?

"There is a phenomenon which one might call Paralytic Radicalism, in these days, which gauges with statistic measuring-reeds sounds with philosophic plummet the deep dark sea of troubles, and having taught us rightly what an infinite sea of troubles it is, sums up with the practical inference that nothing whatever can be done in it by man, who has simply to sit still, and look wistfully to time and general laws; and thereupon, without so much as recommending suicide, coldly takes its leave of us. Most paralytic, uninteresting; unproductive of any comfort to one! They are an unreasonable class who cry 'peace, peace', when there is no peace. But what kind of class are they who cry 'peace, peace'—have I not told you that there is no peace? Paralytic Radicalism is one of the most afflictive phenomena the mind of man can be called to contemplate. One prays that it at least might cease. Let Paralysis retire into secret places and dormitories proper for it; the public highways ought not to be occupied by people demonstrating that motion is impossible. Paralytic; and also, thank Heaven, entirely false! Listen to a thinker of another sort: All evil, and this evil too, is as a nightmare; the instant you begin to stir under it, the evil is, properly speaking, gone. Consider, O reader, whether it be not actually so? Evil, once manfully fronted, ceases to be evil; there is generous battle—hope in place of dead passive misery; the evil itself has become a kind of good."

Surely the truth these words embody should be engraven upon all minds. Whatever we do, let us keep clear of Paralytic Radicalism, the Radicalism which acknowledges with the utmost frankness the existence of intolerable evil, and yet counsels us to sit down contented or hopeless under it. No! the instant we begin here in Bengal to stir under the dreadful evil that afflicts us, that evil, properly speaking, will be gone, and generous battle hope will have come in place of dead passive misery. To all practical men therefore we say, let us gird up our loins for doing, and know well that we are here for this very purpose and for no other. "Once rightly girded up, how many things will present themselves as possible" which no one now dreams of attempting.

We are most glad to see the *Friend of India*, that old traditional Power in the State, if not always wisely exercised, taking a decided step in this question. In its issue of 9th instant, it says:—

"The nation retains its right to abrogate laws and internal compacts for the public good, but it also always admits its duty to pay the cost, great or small. If a railway act is passed the power is given to take land in the public name; only it is to be paid for at its full value. Why should not this be done in the case of the Permanent Settlement? Declare that the time has come when the public interest demands that the Permanent Settlement should give way. But let it be paid for. In other words pay the zemindars to return to the ranks of nationality from which an act of Englishmen excludet them. They have a right to hold England to her word without quibble or equivocation. England has a right to say that the mistake of one period shall not be perpetuated to all time. England has no right to repair the mistake without paying the price. One would think that a man like Mr. Stephen, for instance, could adjust this difficulty to the satisfaction of the zemindars, or, if not to that, at least to the meting out to them of strict justice, and at the same time of abrogating a compact which sooner or later must fall. This is exactly the course that has been taken in Ireland. The State admitted its compact with the Irish Church, but it added that that compact had become immoral, and could not be maintained. The fabric was unsound and must be pulled down to prevent it from falling down and burying greater interests in its ruins. Only the State paid the price. We think that this is the course indicated by the signs of the times



—the buying out of the Permanent Settlement. It is the most honourable course. It is the soundest policy. It is strictly right. And as we view the matter, no other right, honourable, and practicable course is open to the Government of India."

This is the right spirit, we venture to think, in which to approach this subject, and not that of Paralytic Radicalism however Radical.

#### THE DECENTRALIZING SCHEME.

THE Indian Press has done scant justice to the financial reform which has been inaugurated by Lord Mayo. Thus one of the two leading Bombay journals describes it as "the grasping scheme put forward in December," and the other as a scheme that treats "the Bombay Presidency like a subjugated province." Upon the whole, the Resolution has been received with a very discreditable amount of carping, and with the smallest possible amount of either able or candid criticism. In our issue of May last, we put the following words into Lord Mayo's mouth as the expression of popular convictions upon the subject of decentralization, in the "Financial statement that should have been delivered and was not?"—

"I now come to a question which I am persuaded lies at the root of all administrative reform in this great empire. We must divest ourselves, as the Supreme Government, of a very large share of those responsibilities which are so unwisely engrossed by us. It is simply impossible, gentlemen, that we should succeed in the attempt to regulate and administer from this city, the affairs of an empire consisting of at least a dozen different nations. It is only by stating the difficulty in these terms that I can excite in your minds the idea that fills my own. Was it ever yet heard, I ask, in the history of the world, that such a task as has been devolved upon us, or undertaken by us, was successfully performed? I believe the effort to be without precedent. What would be thought of an attempt to devolve upon a cabinet sitting in Paris the administration of the affairs of two-thirds of Europe? And yet such a task would be easier than that we have undertaken here, where the people themselves render so little assistance to the State, and local self-government is unknown. Were the English ministry at this moment charged with the administration of justice, the control and disposition of the armies, the management of the finances and debt, the construction of the public works, the oversight of the police and municipal institutions, and the education of the people of all France, Spain, Austria, Italy, Prussia, Denmark, Poland, and the minor states of Europe, in addition to the affairs of the United Kingdom,—it would but image forth what we are attempting in this city. This truly monstrous state of matters must come to an end. It is simply impossible for us, without indefinite harm and mischief, to interfere as we now do with the administration of affairs in provinces of which we know nothing. I would not exaggerate the evil, and it is all but impossible to do so. I am not advocating the disintegration of the empire. I would bind its provinces more closely together, but I would not attempt to do so by the clumsy device of engrossing all authority in this city. Surely we have before us in America an example of the course which we might follow here—a Central Executive, omnipotent for all imperial purposes, with complete local independence in the several States of which that wonderful empire consists. Do you think America would have constructed forty thousand miles of railway in the same time in which we have painfully laboured to construct four? If the system of government which paralyzes all local action here had existed there? Gentlemen, the Governor in Council in Madras should be a real and not a sham administration. If that Government is not competent to determine what public works are essential for the Presidency, what taxes least objectionable to its people, what expenditure it should make upon education, what upon the thousand works of local improvement which it needs, and what establishments are required for its public service, then should it give place to one that is competent to decide upon these questions. What must cease is the casting upon us of purely local responsibilities, which we are not fitted to discharge, and the exigency of which precludes our giving just attention to purely imperial affairs."

Now we appeal to the candour of the Indian public whether this language does not fairly represent what we have all been demanding for years past? Well, what has Lord Mayo done? He has complied literally with a very substantial part of the request thus preferred. Henceforward, each local Government will determine for itself what "public works are essential for it, what taxes least objectionable to its people, what expenditure it should make upon education, what upon the thousand works of local improvement which it needs, and what establishments are required for its public service." The concession is honestly, frankly, and loyally made, but is spoiled it appears, because it comes burdened with the condition that each province is to determine for itself—what was part of our demand—"the taxes that are least objectionable to the people." The criticisms which have been passed upon the measure will not raise the character of the Indian Press. When we remember how conservative power makes men, and with what difficulty concessions of this order are wrung from administrations, we think that Lord Mayo and his Council deserve public gratitude. Certainly we never expected last May, when embodying the popular wish in the terms we have quoted, that its concession was so near at hand. No one could reasonably have expected the full reform desiderated to be at once granted; nor would it have been wise to proceed in a matter of so much gravity but in the tentative form that has been adopted. We regret that we did not in our last issue recognize the value of the concession with less reserve. It is a most substantial and weighty reform, and merits full acknowledgment on the part of the public, for it has been conceded not to outside pressure, but to the loyal recognition by Government of the fact that what the people desired was wise and just in itself.

The fact that the concession comes attended with the necessity of retrenchment or local taxation has been made too much of. The real mistake of the Resolution is the declaring the present allotments from the Imperial Treasury to be permanent. That these allotments are unfair was shewn in our last number. When they come to be readjusted upon really equitable principles, it will be well if some of the noisiest of the clamourers against the Resolution, do not find that undue favor has been shown them therein.

Our own conviction is well known—that no satisfactory decentralization of the finances is possible that does not begin with the revenue side of the account, with an intelligent determination of what revenues are properly local and what imperial. Madras, Ondh, and the North-West Provinces burden their cultivators with an impost upon the land that suffices to defray the whole cost of the civil administration and of the purely local public works in each province, and still shews a large surplus every year. Why should the Imperial Treasury claim that surplus as its own? It does not belong to it: it belongs to the province in which it is raised. Mr. Strachey tells us that the secret of "setting our financial house in order is" shortly this,—Don't expend imperial revenues upon local objects, but give the local Government a discretionary power "to raise their own funds for purely local purposes." But the previous question arises, what are imperial revenues? If we are to assume that the existing revenues of Madras are imperial and to be appropriated by the Imperial Government, while we leave Madras to such appointments as it may be able to command for the construction of the public works which it requires, we mock its demand for independence. We take the revenues, and get rid of all importunities for their restitution. Surely, we must see that decentralization of this order would simply inflict further wrong upon the local Governments. The principle which should guide us is obvious. To meet the imperial charges of the army, debt, home treasury, &c., the Imperial Government should receive in the first place, the proceeds of all such taxes as fall with equal weight upon the whole country, such as customs' duties, salt, stamps, opium, the post office, &c. The land revenue which falls with unequal weight upon the provinces, must plainly be held to be a local tax, also the abkatee, and all other taxes, the weight of which is not

uniform throughout the country. The proposal that we should take the Madras revenues as the Madras Government should undertake out of supplemental revenues to construct such public works as it requires is a very convenient arrangement for the Imperial Government, but a very awkward one for Madras. Madras must keep its own revenues of a local order, and with them, or upon loans contracted upon the credit of them, execute all purely local public works. The great lines of railway and telegraphs, and military works, are perhaps the only public works which the Imperial Government should undertake. All local lines, tramways, roads, irrigation, and other works should be constructed out of the revenues of the local Governments, or out of loans raised by them upon their own credit. In other words, we want decentralization of the same order as in America. If the imperial resources fall short of the imperial necessities, then should each Government be assessed according to its population and resources in an annual contribution thereto. The reform is simplicity itself, and neither difficulty nor danger would attend its introduction. We must not be deluded by a shadow of the thing we seek for while we miss the substance.

We pointed out in our last issue, that the average annual receipts from the land, and the average annual charges for purely local purposes, during the years 1861-62 to 1868-69 were as follows:—

	Land Revenue £	Civil Charges £	Local Works £	Annual Surplus £	Annual Deficit £
Bengal .....	3,900,000	2,445,000	816,000	639,000	.....
Madras .....	4,000,000	2,080,000	705,000	1,255,000	.....
Bombay .....	3,450,000	2,445,000	1,200,000	.....	195,000
N. W. Provinces .....	4,000,000	1,530,000	665,000	1,805,000	.....
Oudh .....	1,100,000	390,000	194,000	546,000	.....
Punjab .....	1,900,000	1,000,000	640,000	260,000	.....
Central Provinces .....	538,000	410,000	278,000	.....	152,000

The table reveals the fact that these Lower Provinces are contributing no more than £639,000 a year towards the charges of the Imperial Government. The whole of the land revenue except this amount, is at present absorbed in the cost of the civil administration and public works. In Bombay the case would be worse, but that the land there not being permanently settled may be expected by-and-by to return the outlay made upon public works many times over. The land-tax is, we say, the local tax of each province, all the other taxes, customs, duties, salt, stamps, opium, &c., being strictly imperial in their nature; as in general they bear equally upon the whole country and where they do not, ought at once to be made to do so.

Let us once more summarize and compare the expenditure upon purely local purposes, with the proceeds of the one purely local tax during the last eight years:—

	Land Revenue £	Local Expenditure £	Surplus £	Deficit £
Bengal .....	31,202,400	26,148,100	5,054,300	.....
Bombay .....	27,006,000	29,055,870	.....	1,449,870
Madras .....	32,846,000	22,793,000	10,053,000	.....
N. W. P. ....	32,887,000	17,562,000	15,325,000	.....
Punjab .....	15,180,498	13,556,100	1,524,398	.....
Oudh .....	8,734,121	4,722,000	4,012,121	.....
C. Provinces ..	4,290,000	5,738,000	.....	1,448,000
Burmah .....	4,194,522	4,099,000	95,522	.....

It is clear at a glance from this table that Madras, the North-West Provinces, and Oudh are overweighted. The expenditure upon public works in Bombay has been abnormally high (£2,500,000 in eight years), and the result is a deficit there, just chargeable, however, against the future increment of its land revenue. Bombay should be allowed to spend what it pleases upon its land, but should not be allowed to look to the Imperial Treasury for the funds. The North-West Provinces, Madras, and Oudh are at present being made the "milch-cow" of the Imperial Treasury. These figures will come, we believe, upon as a surprise, our finance being a chaos, full of darkness and injustice, but happily ever struggling into light and order.

### THE STANDARD OF LIVING.

#### TAXATION.

We have been attempting in the last two or three numbers of the *Statistical Reporter* to give some general idea of

standard of living among the people of India. Upon the whole, the full dietaries of the provinces are perhaps a somewhat favorable picture of the ordinary style of living in the country. And if we add thereto the simple luxuries of tobacco, gan-sop-aree, and sweetmeats, we exhaust the table of the Hindoo.

"The food of the common people," says Mount Stuart Elphinstone, "both in the country and in towns, is unleavened bread with boiled vegetables, clarified butter or oil, and spices. Smoking tobacco is almost the only luxury. Some few smoke intoxicating drugs; and the lowest castes alone, and even they rarely, get drunk with spirits. Drunkenness is confined to damp countries, such as Bengal, the Concanas, and some parts of the south of India. It increases in our territories, where spirits are taxed; but is so little of a natural propensity, that the absolute prohibition of spirits, which exists in most Native states, is sufficient to keep it down. Opium, which is used to great excess in the west of Hindoostan, is peculiar to the Rajpoots, and does not affect the lower classes. All but the poorest people chew betel (a pungent aromatic leaf) with the hard nut of areca, mixed with a sort of lime made from shells and with various spices, according to the person's means. Some kinds of fruit are cheap and common. The upper classes, at least the Brahmin part of them, have very little more variety; it consists in the greater number of kinds of vegetables and spices, and the cookery; asafetida is a favourite ingredient, as giving to some of their richer dishes something of the flavour of flesh. The caution used against eating out of dishes or on carpets defiled by other castes gives rise to some curious custom. At a great Brahmin dinner, where twenty or thirty different dishes and condiments are placed before each individual, all are served in vessels made of leaves sewed together. These are placed on the bare floor, which, as a substitute for a table cloth, is decorated for a certain distance in front of the guests with patterns of flowers, &c., very prettily laid out in lively-coloured sorts of sand spread through frames in which the patterns are cut, and swept away after the dinner. The inferior castes of Hindoos eat meat, and care less about their vessels; metal, especially, can always be purified by scouring. In all classes, however, the difference of caste leads to a want of sociability. A soldier, or any one away from his family, cooks his solitary meal for himself, and finishes it without a companion, or any of the pleasures of the table, but those derived from taking the necessary supply of food. All eat with their fingers, and scrupulously wash before and after meals."

\* One of the most curious delusions of our time is the notion that a people whose tastes are so simple, and yet so much in accordance with the climate, should ever be successfully taxed through the Custom House. The hope of such success is cherished in forgetfulness of the fact that no tax ever draws well until it reaches the masses. The success of indirect taxation at home arises from the fact that through the Custom House lies the highway of half a dozen products of foreign industry, consumed by every man, woman, and child in the country. In India, the people grow literally everything which they require at their own door. In England we get a very large revenue from a very small duty upon tea, because every one uses tea; from sugar because every one uses sugar; and from coffee, because every one uses coffee, and because tea, sugar, and coffee are all products of foreign industry that must pass the Custom House. A glance at the following table, showing the consumption per head of population in the United Kingdom of a few articles of foreign produce, may help to fasten on the mind of the reader the conviction we have so long striven to spread in this country:—

#### Annual Consumption of foreign Produce, United Kingdom 1870.

Sugar and Mollasses .....	51.06 lbs. per head of population.
Tea .....	3.84 " "
Coffee .....	1.01 " "
Cocoa .....	0.28 " "
Tobacco .....	1.37 " "
Tallow .....	0.72 " "
Rice .....	0.46 " "

50.00 lbs. per head

Wine 1869 .....	0.49 gallons per head
Spirits " home and foreign 1869 .....	0.26 " "

With every man, woman, and child in the kingdom thus consuming 20 lbs. of foreign produce per annum, and nine bottles (1½ gallons) of wines and spirits, what wonder that the Custom House yields a revenue!

Few persons have any adequate idea of the quantity of foreign produce consumed by even the poorest in England. A wealthy family, keeping 17 indoor servants, carefully managed, and spending £3,000 a year, will consume every year we are told,—

Tea .....	220 lbs., or	11 lbs. per head.
Coffee .....	120 "	6½ " "
Sugar .....	3,061 "	98 " "
Wine .....	166 gal.	8 gallons "
Beer .....	2,206 "	106 " "
Spirits .....	51 "	2½ " "

The consumption of the manual labour class throughout the country, was made the subject of exact enquiry by Mr. Baxter about two years ago. He found that the average consumption of fifteen families of journeymen printers in Westminster, each family consisting of 4½ persons, was as follows:—

Tea .....	21 lbs. per year.
Coffee .....	21 " "
Sugar .....	151 " "
Tobacco .....	64 " "
Beer .....	106 gallons per year
Spirit .....	2 " "

The average income of these families amounted to about £92 a year, of which the rental absorbed £25, and there was still this enormous consumption of foreign produce. The average consumption of six families in still poorer circumstances, living in the east of London, and earning an average income of £53 10s. per year, was,—

Tea .....	19 lbs. per year
Coffee .....	5½ " "
Sugar .....	147 " "
Tobacco .....	64 " "
Beer .....	36 gal. per year.
Spirits .....	1 " "

The rental in this case absorbed nearly £14 of the income. The consumption of the same class of workmen in the country towns of England was considerably higher, the amount saved in rental being spent in food. Thus the consumption of a Sheffield workman's family earning £62 a year, but paying only £8 rental, was,—

Tea ... ..	32½ lb., per year.
Coffee ... ..	89 " "
Sugar ... ..	182 " "
Tobacco ... ..	144 " "
Beer ... ..	160 gal. "

The consumption of the agricultural classes in the same neighbourhood, but earning lower wages, told still the same story:—

EARNINGS...	Father ..	£39-0-0
	Mother ..	8-12-0
	Children ..	5-8-0
		£ 48-0-0

Expenditure...	Rent and Rates	...	£ 4-11-6
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Consumption...	Tea ... ..	19 lbs. per year
	Coffee ..	18 " "
	Sugar ...	90 " "
	Tobacco ..	6 " "
	Beer ...	68 gal. "

The consumption of the very poorest class of agricultural laborers in the country, the farm laborers of Devonshire, where families of 5 and 6 persons are earning less than £29 a year (25 Rs. a month) and paying £3-10 a year for rent, was still as follows:—

Tea .....	6½ lbs. a year per family of 5 persons.
Coffee .....	4 " "
Sugar .....	8½ " "
Tobacco .....	2½ " "

We pause for a moment to express our indignation at the disclosure this table makes. No one will allege that the standard of living of the average workman in the towns of England is above the requirements of the climate, while it is plainly luxury itself compared with the starvation standard of the agricultural poor. And yet we have men in India whose one aim seems to be to introduce the landlord system with its attendant curses into India, as the height of their statesman-

ship and ambition. Now we have adduced these figures to give nerve to the conviction so imperfectly grasped in this country, that taxes are really productive only when they reach the masses, only when they reach everybody. We have not the smallest doubt of the possibility of raising a very considerable revenue in India from direct taxes falling upon everybody, like the capitation tax of Burmah. What we have ever doubted and denied is the possibility of our raising a large revenue in India from indirect taxation, unless we tax the necessities of life grown in the country itself; for the simple reason that the tastes of the people and the traditional standard of living amongst them are so exceedingly simple.

#### OUR EXCISE.—II.

It is impossible to follow up the suggestions which were raised in the *Indian Economist* for January regarding the possible state of our Excise Revenue in India without collecting and sifting all kinds of details known and understood only by experts and local officials. Figures are only symptoms which may easily mislead; they may indicate wide differences of result, but the causes can only be ascertained positively by a much more comprehensive analysis than can be effected by mere comparison of returns. However, if any official personage thinks the matter worth looking into, we can propose one or two rules for his general guidance. His object is supposed to be to satisfy himself that the revenue from intoxicating spirits and drugs in India is not diminished, or at least kept from rising as it might, by smuggling on a considerable scale. And he may confine his investigations to those provinces in which the Central Distillery System is used, since, where distillation is in the hands of the monopolist farmers, they themselves may be relied upon to put down interlopers; on the other hand, where the State has broken up all monopolies of distillation, and has merely insisted that all stills must be worked under Government inspection, in order that the still-head duty per gallon may be duly realized—there it is obvious that the State has undertaken, as the first condition of a successful excise revenue, to put down and utterly extinguish contraband distilleries. If this condition be not rigidly fulfilled, the system has failed; and even a non-official can perceive at a glance that the task is very difficult. The raw material for brewing liquor grows wild over half of India; the only machinery needful is a pipkin and a bamboo; the jungles afford at once fuel, material, and concealment, and the police have been known to be conveniently blind. Moreover, even when the distillery is actually carried on within the Government enclosure, the danger is hardly less. The officer who measures quantity, tests quality, and levies the duty, is an ill-paid native clerk, who is exposed to severe temptations, for he can cheat the Government both as to the quantity and quality of the liquor passed out, and can levy the differential duty for his own privy purse, without the possibility of being detected save by treacherous espionage. We believe that recent close scrutiny into the management of the Salt duty as taken at the pans in Bombay, has produced a violent presumption that very large quantities of salt pass out free; yet the Salt Customs establishment is much stronger in every sense than the ordinary staff of an Excise Department.

Thus stand the probabilities of the case. They must be taken for what they may be worth in various parts of India; but they seem to present *prima facie* ground for disquietude, wherever the Central Distillery System has not been rigidly supervised. Of course, we cannot tell whether rigid supervision is or is not universal; but the mere examination of returns, if they could be compared throughout India, might lead one a little further. Suppose, for instance, we could obtain from each province and government under the Central Distillery System, a statement giving the number of shops licensed to sell liquor, and giving also the number of gallons of liquor passed out (duty paid) from the stills,—we should then see what rates the number of shops bear in different parts of India to the number of gallons—that is, what quantity of liquor each shop draws from the taxed still. If some shops drew an

exceedingly small quantity, this would be suggestive, for the dealer must sell a certain quantity, or the trade would not keep him. And if these returns could be taken for a term of, say five years, we should be able to determine the very important question whether the number of retail shops is increasing or decreasing in due ratio with the variations in quantity of liquor distilled. All the retail shops are supposed, be it remembered, to deal with the taxed stills, and with no other. If, therefore, in any province the number of retail shops has increased, while the quantity of liquor passed from stills is the same, this is odd, but not very remarkable, for competition may have come into play; but if the retail trade in liquor is found, by the gradual multiplication of shops, to be flourishing handsomely, while the outflow from the taxed stills remains sluggish, then we may begin to sniff very suspiciously about the neighbouring jungles and hole-and-corner suburbs. And as soon as the still-head liquor begins actually to decrease in quantity passed out, while the retailers are driving a thriving and spreading trade—if such a coincidence be ever disclosed by any statistical comparison—then we may fairly and reasonably adopt the conclusion that the smuggler has been too much for the virtue or the vigilance of the exciseman. We have recently observed in the *Indian Mirror* an article upon "Abkaree Administration," which brings up again very heavily against the English Government the old charge of encouraging liquor distillery for the sake of increasing the revenue derived from it. Upon this matter our present article does not touch, for the only point now at issue is whether the Farming System (when properly managed) encourages drinking more than the Central Distillery System; or whether it merely raised more revenue from the same consumption. We have said that if the Central Distillery System can be proved to have checked intemperance, the loss of revenue is a gain to the commonwealth. However, we observe that the *Indian Mirror* declares that "the number of 'shops for the sale of intoxicative liquor and drugs has, we believe, more than quadrupled in most of the large villages and during the last 20 years, at the lowest estimate." If this be true, then no condemnation can be too strong for such shameful maladministration. But may we venture to ask our contemporary for statistics? It is easy, moreover, to repeat the cry that no drinking went on under Native rule; but the only persons who can now say what did go on in provinces which we now hold, are those who have carefully examined the old revenue accounts of our predecessors, and who know what a vast amount of contraband distillation prevailed under their loose and unmethodical administrations. We should be glad to see the *Indian Mirror* return to the subject, and deal with it more precisely.

#### PRODUCE OF THE LAND IN N. W. PROVINCES.

To the Editor of the "*Indian Economist*."

SIR,—I acknowledge the courtesy and ability of your criticism on my estimate of the agricultural produce of the N. W. P., but I will not trespass on your space by going largely over the same ground again. I will only say that I did not intend to draw such a "hard and fast" line as you represent. I accepted a rate of 25 seers per rupee, although I asserted that 30 seers was a more accurate rate to assume as the price which agriculturists get for their produce, for this, and not the average market price, is the true point to be considered. The cultivator sells his produce in December and in May, and sells it always at a rate a little below the market rate for that produce at that time, the market rate itself being lower at that time than at any other month in the year. That jowaree sells much higher in May, and barley in October, is no good to the cultivator but pure loss: the increase goes to the bunnia as interest on the capital embarked in his trade. At 30 seers the gross consumption, by my reckoning, amounts only to 26 millions sterling; I added on 4 millions to cover the margin necessary for the items you mention, the small luxuries of the agriculturists, and the higher style of living in towns. You confront me with an estimate which gives Rs. 0-2-3 a day as the cost of a man's subsistence. To this

I reply that in every English household in the N. W. there are several servants receiving only Rs. 4 or Rs. 4-8 a month, or Rs. 0-2-2 to Rs. 0-2-6 a day. Yet on this I have frequently known a family of 5 and 6 mouths to be fed and clothed. Such people are, of course, far worse off than a cultivator who consumes the produce of his own land, and so far is not affected by a rise in the market.

But the principal point that you insist on is the value of fodder, (jowar stalk, chaff, oil-cake, and cotton seed,) which you estimate much more highly than I did, putting it, on the strength of some Sindhana returns which I have not seen or have forgotten, at half the value of the grain. Now here you will notice that I was careful to speak of the *selling* value of fodder, meaning thereby not the market value, but the quantity for which I suppose that a market exists. The distinction I wish to draw is this: Fodder is not, and from its weight cannot be, carried far, nor is there much more produced than is required for home consumption. The demand of the large central towns is supplied by the neighbouring villages from their surplus production. But suppose that over a large tract the system of cattle-feeding was suddenly changed, that stall-feeding was given up, and more land placed under pasturage, and that all the fodder was suddenly thrown on the market, what would be the result? There would be no sale for it, and the price would fall to nothing. Under the present economic condition of the country, there is a demand only for a very moderate supply, that supply being the surplus above home consumption. If a hundredth part of the fodder produced is sold, and if much more than that could not be sold at all, it is idle to take the market price as the ruling rate, and, multiplying it by a hundred, to say that is the "value of the fodder." As a matter of fact, the "selling value" is the price fetched by the surplus only—the price of the small quantity that is not required for consumption at home, and for which alone a demand exists.

But whether this be so or not, I wish to point out how little any concession on this score assists the main line of your argument as to the relation between produce and land-tax. If the discussion is to be conducted only in the dry light of a philosophical enquiry, and to turn merely on the purchasing value of agricultural produce, I will agree (for the sake of the argument) that a higher value ought to be placed on fodder. But when you try to effect a junction between this branch line and your main argument as to what the assessment ought to be, I must assert that your argument is, to a certain extent, self-destructive. The higher you raise the rate of consumption, the less margin you leave for taxation, since it is obvious that whatever be the quantity that the agriculturist with all his frugality, necessarily consumes, that minimum must be deducted from his income in a financial point of view, and only the balance remains as a fund out of which rent can be paid. From this point of view, I think you must concede the truth of my statement about fodder. Of course if the fodder is used, as you say it is in Nimar to support cattle bred for sale, that is not home consumption in my sense, and the fodder goes as fairly into the fund for taxation as if it was sold direct. But in the North-West the conditions are different: not only is there no breeding of cattle for sale, except in a few peculiar tracts, but, of the plough-cattle who are required to raise the produce we are discussing, not more than half (if so much) are home-bred, the rest are purchased from Bundelkhand and Central India. This fodder, then, supplies nothing to the tax-fund; it only goes to support the human and animal mechanisms by the exertions of which the existence of a tax-fund at all is created and made possible. In order to ascertain what this tax-fund is, we must deduct the necessary minimum consumption of agriculturists whom I take at  $\frac{1}{2}$  of the total population from the gross produce. I add to the consumption  $1\frac{1}{2}$  million sterling (in Hume's calculation put it at 8 annas per head) paid for salt, and half a million as the price of half the plough-cattle, (assuming the total number to be 30,000 pairs at 6 annas per plough, average value Rupees 20 per pair (duration of working life 10 years). This, then, is how the calculation of the surplus stands on your own assumption:—

	Gross produce (Indian Rupees)	Minimum consumption by Agriculturists (Rs. millions.)
Food of 80 millions .....	80 millions.	46 millions.
Seed Corn .....	10 "	10 "
Clothing .....	5 "	44 "
Fodder and Garden .....	8 "	" "
Exports .....	8 "	" "
Salt .....	0 "	1 "
Plough-cattle .....	0 "	1 "
	92	67½

surplus 24½ millions, so that if the true theoretic rack-rent were taken, if every cultivator paid in rent every penny that the produce over and above what is necessary to keep him alive, the gross rental of the province would be 24 millions, and the land-tax, which is half the rental, would amount to 12 millions. The possible maximum, on your assumption, is therefore nearly three times the present assessment, or 2½ times what it will probably be when the re-settlement is completed; but far less than you have yourself calculated a fair and full assessment to be. But now turn to my estimate. I put the total produce at 47 millions, reckoning export at 10 millions, but this figure, which I assumed with the greatest hesitation, was meant as an approximation to the full market value of the manufactured exports, which are chiefly indigo and sugar. It is obvious, however, that the value to the agriculturist is very much less. A great portion of the price is due to the manufacturing labor and capital expended on it. Indigo, for instance, which as *plant* is worth 40 Rupees to the cultivator, sells for 320 Rupees in its manufactured state, and I shall probably be well within the mark if I put these exports as worth in the market double the value of the raw produce to the cultivator, *quoad hoc*, they may be taken at 5 millions. I confess that this is more a guess than an estimate, but I offer it only as the best I can form:—

	Value of Gross produce to the cultivator	Home consumption of the cultivator
Food of 80 millions.....	80 millions	22½ millions.
Seed corn .....	9 "	9 "
Clothing .....	2 "	1½ "
Fodder .....	2 "	0 "
Export .....	5 "	0 "
Salt and Plough bullocks ...	0 "	2 "
	42	29

The surplus here, *i. e.* the rack-rent, is 13 millions. The full land-tax, if no cultivating or intermediate rights intercepted any portion of the rent-fund, would be six and a half millions. As I have said before, the full account, when completed, would probably be five millions if no part of the province were permanently settled, and three millions, by my calculation of the rack-rent, are intercepted by cultivators who enjoy a beneficial interest in the land. The actual rent-roll of the North-West Provinces is ten millions sterling, of which the Government share at present is four and will soon be four and a half millions. If all our districts were liable to re-settlement, it would be five millions, and the actual and theoretical land-tax would agree together.

There is another way of testing your conclusion which I have not left room for myself at the close of this long letter to do justice to. We in this province are not unfortunately without records of assessments which have crushed out the life of the people, destroyed the heritage of races, imperilled the safety of the State, and broken down in the end. These records stand as beacons to our settlement officers to warn them off the shoals they should avoid. It is possible, of course,—nay, it is natural—to fall into the opposite extreme; but though you have shown that Charybdis is dangerous, it is not the less true that Scylla is fatal. If, then, I can shew that an assessment framed on your principles would be more crushing and more ruinous than an assessment famous for its severity, and which was found to be impracticably high, I shall have urged a strong rebutter against the charge you bring against settlement officers.

I have lying on my table, in the December number of the *N. W. Revenue Reporter*, Mr. McConaghey's excellent report on pergunnah Thir in the Mynpoore district. This pergunnah was assessed in 1840 by one of the best of the settlement officers

of those days, Mr. Edmonstone, afterwards Lieutenant Governor of the N. W. Provinces. He fixed on it an assessment of Rupees 90,177. In ten years, this assessment had utterly broken down, a third of the land had changed hands, the revenue could not be collected, and in 1845 it had to be reduced by 24 per cent to Rupees 74,920. Now by your calculation 24 millions of acres produce 92 millions sterling, or £3 5/8 per acre, and you maintain that in the good old times half or a third of this was actually taken, and that now even a mistaken lenity ought not to reduce the land-tax below a sixth. In 1840 there were in this pergunnah 36,838 acres of cultivated land, whose produce at £ 2-5-6 per acre was 14,12,140 Rupees. Your minimum assessment on this would be Rupees 2,35,456. Grant that that produce has doubled in value since 1840 (which is an extravagant admission), still the gross value was then Rupees 7,06,070, one-sixth of which would be Rupees 1,17,680 or larger by Rupees 21,503, or nearly 20 per cent more than an assessment that signally broke down.

I am, yours faithfully,

C. A. ELLIOTT.

The same gentleman writes to us in another letter—

"As to Nimar, you say nothing of *tenures*. If our assessment 'was a rent, you would be unanswerable, but it is a tax on rent, 'and as such we can't raise the rent, or touch it, or take more 'than half of it, be it ever so low.'"

It is necessary to remind the writer that that which seems to him so natural, the commutation of the State claim to rental into a mere *tax* upon the rental, is one of the chief subjects of our complaint. Under the ascendancy of the school that has been incessantly tampering with the land revenue these years, our settlement officers have been instructed in the North-West Provinces to abandon half the rental (nett assets they call it) to the so-called proprietor, whereas under the last settlement his appointed share was but one-third. In the Central Provinces, there was no proprietor-class at all, but Sir Richard Temple, equal to the occasion, has been allowed deliberately to *create* a class to share the rental with the State. Without entering upon the vexed question of the existence of proprietary rights in the North-West under Native rule, we are willing to accept it as a fact that such rights did exist, and that they were properly recognized by allowing their owners to appropriate a third of the rental, or nett assets, in assertion of those rights. Nothing is more certain at the same time than that this concession created a settled proprietorship in land, unknown in the country under the exigencies and irregularities of Native rule.

A most generous and considerate treatment of these most doubtful rights had been shown, and if any change whatever were to be made with regard to them, every teacher of economic science will affirm, as with one voice, that the interest of the commonwealth pointed either to the reduction of their amount or to their redemption by the State. But in some way or other the world knows not now, some one or other, the world knows not who, has taken it upon himself in the last few years to lay it down as a rule of all re-assessments that the State claim should be again lowered, and that instead of one-third assets these so-called proprietors should be allotted one-half the rental. The settlement officer is simply carrying out his instructions. It is a school of statesmen in Calcutta who are responsible for the change; a change, as we have said, in the teeth of the direction in which the State should have moved, as all economic authorities agree. The same school having their fling in the Central Provinces, have there *created* a proprietary class for the very purpose of conferring upon them one-half the State rights. Our correspondent complains that we "say nothing of *tenures*" in Nimar. Why our columns were filled, we thought, with the Malgoosar, at the risk of sickening our readers with the name.

We say "nothing of *tenures*"—why! We simply refuse to recognize them! We demand their abolition; we say that their creation is an outrage, and that the men who have assumed a right of alienating one-half the State rights in the soil, should see their work reversed before their eyes. A more daring revo-



lution was never made than that which Sir Richard Temple has effected in these Central Provinces, in transferring the State claim to the rental of the land to the *malgoosars*. We are only upon the threshold of this *Malgoosar* question, and we shall have to burden our columns with it many days to come. We take up the first Settlement Report of these Provinces that comes to hand. It happens to be the Chindwara report, and here is what the Commissioner himself tells us about its tenures: "From the time of the Mahratta rule, the land has always been held on what may be called *Zemindaree* tenure. Every village had its *Patel*, who paid the revenue to Government, drawing the rents from the cultivators. The remuneration of the *Patel* was, as is stated, about 15 per cent. on the rental. The amount assessed on the village was made known to him; he, again, distributed this amount among the various cultivators. As is shown by Mr. Ramsay, *neither the Patel nor the cultivators had any fixed and indefeasible rights in the soil*. The whole of the land belonged to the Government absolutely, and, if a *Patel* refused to accept the terms offered him, or a cultivator to pay his quota of the assessment, the former would have been ousted from the *Patelship*, and the latter from his holding. The present settlement has been made with the *Malgoosars (Putals) to whom proprietary rights over their villages have been conceded*." And so, instead of the traditional 15% upon Government collections, these mushroom proprietors are allowed and encouraged to screw whatever they can get out of the cultivator, while their own contribution to the State is fixed at a few annas per acre for 30 years to come. The course is so monstrous, so scandalous, so fraught with ruin in the future, that we are amazed that the whole Press of India has not long since forced its reversal upon the State. We protest with our whole might against the modern proceeding in the North-West of conferring half the rental upon men who were but doubtfully entitled to a third, and in the Central Provinces of conferring the entire rental—for that is what it comes to—upon a class that had no claim even to a fraction of it, but from time immemorial had received merely 15 per cent. for collecting the Government assessment.

Were this revolution one socially or economically desirable we could understand its having been sanctioned, but it simply means social convulsion and economic ruin to the provinces. Who shall arise to reverse the wrong? And when do our contemporaries mean to look into it?

We have replied not without some pardonable but unintentional warmth to our correspondent's statement, that we say "nothing about tenures." We protest to Mr. Elliott—who is in a very influential position, a position which no one, moreover, in the country is more qualified to fill—that this modern practice in the North-West of raising the so-called proprietor's share in the rental from one-third to one-half the assets, to the loss and damage of the State, is an injustice and a wrong. Mr. Elliott himself tells us in his interesting letter, that the actual rent-roll of the Provinces is £10,000,000 sterling a year. Well, we should be well content with £10,000,000 sterling as the issue of all our criticism; and we know very well that under native rule a very mild percentage of this sum would have been accorded to private proprietary rights. Where our native predecessors would have taken £10,000,000 sterling, less a mild percentage for collection or for doubtful proprietary rights, we, it is allowed, have been taking only £4,000,000. It will soon be a four and half millions however; and if all the districts were liable to re-settlement, would be five millions. Four millions and half, then, are all we are to expect from the land of the North-West Provinces for 30 years to come, where our predecessors would have been taking ten. So that in the face of our enormous expenditure upon irrigation and railways in the Provinces, past and prospective, the rent receivable by the State in the year 1860 is to be about what it was in 1846. So great a revolution in the condition of the people has taken place already, while we are but half way through the period, as to be without parallel; and the gross produce of the land upon the most moderate computation has risen 40 per cent. in value: still

the assessment cannot be raised. We put the case thus, because in the absence of exact statistics, it is in this way only that we can demonstrate the fact we are insisting upon, that the land is under-assessed. It is only right to add that our correspondent does not conceal that he does some injustice to his own convictions by his letter. There is no violation of confidence in our saying that he tells us in private communications that our strictures were really needed, and that our settlement officers were undoubtedly drifting into under-assessment from the fear that higher ones would break down.

It would be easy for us to go through the latter step by step and reply to it, but in the absence of statistics that are reliable it would serve no good purpose, and we have no desire for a mere argumentative victory any more than Mr. Elliott. His letters are very valuable and welcome, and we rejoice to know that he, at all events, is alive to the wisdom and necessity of our resisting the further efforts of a school who, by their tampering with the revenue, have brought upon us all our present embarrassments. To check this evil is all we write for.

What Mr. Elliott says concerning the fund from which the rent comes is of course true; but it does not help us in this controversy. The fund will vary in amount according to the value of the harvest, and it is this question of value that is in dispute. We are satisfied that Mr. Elliott's estimate is too low, and the tax-fund from which the rent comes considerably higher than he supposes. The harvest consists in the main of food for man and fodder for beast, and we believe that his estimates of both are too low, but in the absence of exact information we can only fall back upon such general demonstrations as we have given above.

Before leaving this subject of produce however, and the consumption of food by the people, we may observe that Mr. Elliott seems to have forgotten, and we had ourselves overlooked, his own elaborate account some years ago of the style of living, and the value of fodder in the Central Provinces. In his Settlement Report of the Hoshungabad district, he tells us (para 84) "that the cultivator or laborer generally eats three times a day, and that a seer of rice or wheat flour, or one and a quarter seers of jowar, are reckoned the average food of a hard-working able-bodied man."

As a seer of flour is equivalent to 2½ lbs. of grain, Mr. Elliott's estimate of the average consumption of the Central Provinces corroborates Captain Forsyth's. Is the standard of living lower in the North-West than in Central India? In spite of the finer physique of the people, we are half disposed to believe that it must be so. Upon the whole, we are disposed still to maintain that our estimate of the food-crop of the Provinces at 2 lbs. per head per day, including therein the consumption by cattle, cannot be safely lowered. Mr. Elliott himself tells us in the Report already quoted, that "the cultivator who owns four bullocks has, on an average, two or three cows and a buffalo also, and that the bullocks will get half a seer of *chali* or *teara* a day for two months." Again (para 50) that "almost every cultivator has at least one buffalo, and many have more; large cultivators owning often eight or ten buffaloes. They calve in July or August and remain in milk for six months; those that do not calve again next year, give milk for a whole year. The buffaloes are very well fed, and as long as they are in milk their owner will grudge them nothing. A seer of *binola* and a seer of oil-cake or *chali* are commonly given as a daily ration, and in the cold weather the cultivator regularly outs a large basketful of leaves of the *ber* for his buffalo. In old times he sold the *ghas*: now that he is rich he eats it."

We suppose that this is a fair description of the farmer's management in the North-West as well as in these Provinces; and that there also, as the cultivator has become rich of late years, he himself consumes what formerly he sold. Surely, however, we must include such fodder in our estimate of the produce of the land. Under the undue depreciation of such items as are expressed in his letter, Mr. Elliott erred from his estimate of the produce in Hoshungabad the fodder-crops of *ber*, *binola*, and cotton seed, on the ground that they were all con-

"sowed and sown and not sold." We think it was an error, and one that is commonly made in these settlement proceedings. The higher the standard of living upon the farm, the less produce of course will there be for sale.

We were hardly prepared for the admission that the full rent of the Provinces may be estimated at 13 millions; the State demand meanwhile being four. It was the fashion until only the other day, to describe it as a rack-rent of half the produce, which Mr. Elliott himself believes to be upwards of 40 millions sterling, and we contend must be very much more.

The Government at Allahabad is at last addressing itself in earnest to the preparation of statistics concerning the agriculture of the North-West Provinces. A recent *Government Gazette* gives us a series of elaborate statements concerning the harvest of the famine year 1868-69. The tables seems to have been prepared under the orders of the Board of Revenue at Allahabad, and, as a beginning, they are most welcome. Bombay, Madras, and Bengal now stand alone in their neglect of this most necessary and most elementary work. According to these tables, the harvest of the North-West in 1868-69, was as follows:—

## GROSS PRODUCE N. W. PROVINCES 1868-69

	Acres	Maunds 82 lbs.
Rice .. .. .	2,479,874	16,681,568
Cotton .. .. .	871,885	1,110,408
Joaree and Bajree ..	4,302,890	12,865,273
Oil Seeds .. .. .	475,331	1,923,066
Wheat and Barley ..	7,257,873	46,345,722
Pulse, gram, &c. ..	1,653,238	6,657,516
Other crops .. ..	4,836,423	28,756,941
Kurbee (or Joaree stalk) ..	1,956,911	24,498,448
Acres...	23,934,425	188,878,882

Add  
Ghazepore district (particulars not received) .. .. .

842,000

Acres... 24,776,425

Although the year was marked by a very scanty rainfall, it is impossible to regard these figures, in so far as the produce is concerned, as even approximately true. Are we really to believe that the average produce of the land throughout the North-West in the year in question is rightly stated at the following rates:—

Rice .. .. .	7 Maunds or 574 lbs. per acre
Joaree .. .. .	1½ " or 246 " "
Oil Seed .. .. .	4 " or 328 " "
Wheat and Barley ..	6½ " or 520 " "
Pulse .. .. .	4 " or 328 " "

Whatever damage may have been done to the khureef crops of rice, joaree, and til, there was no drought we believe to affect materially the rubbee (or wheat) crop either in 1868 or 1869; and yet, according to these returns, the total harvest of the year amounted but to 113,000,000 maunds of food, of which the tables shew 29,000,000 maunds to have been exported, leaving for home consumption 84,000,000 maunds or about 3,000,000 tons. But the people themselves who are about 80,000,000 in number, must at a moderate estimate require 8,000,000 tons of food a year. The granaries must have been "well stocked," indeed, to have tided the people over such a deficiency as this. We find it difficult to suppose that there is not some vast error in the estimate of the yield of wheat. Can it, we say, be true that the average yield of wheat and barley in the North-West Provinces in almost an ordinary season is but 520 lbs. per acre? We do not believe it.

The returns of the more valuable crops are given thus:—

Sugar .. .. .	599,315 acres.
Vegetable .. .. .	105,420 "
Fruit Trees .. .. .	169,301 "

Here again we doubt these figures exceedingly, while nothing whatever is said either of indigo, opium, or tea, although we know that there are not less than three to four hundred thousand acres under opium alone in the North-West. Could anything be more pernicious than the careless jumbling together of the tea, sugar, opium, indigo, jute, tobacco, and other rich cultivation, under such a heading as this—

## Produce.

Other crops ... 4,336,423 acres, 28,756,941 Maunds

Opium, minutely weighed by the acre, is thus registered as producing on the average 7 maunds per acre. Again, are we to believe that of the 24,000,000 acres of land in the North-West, of which about one-third (*Modern India* page 336) or 8,000,000 are irrigated, there are but 800,000 acres under cultivation with sugar, and 100,000 with garden produce? The Agra district is a dry country west of the Jumna, with less irrigation than most districts of the Provinces, and with the water far from the surface, and yet Mr. Campbell tells us that between 3 and 4 per cent of the land, 20 years ago, was under sugar, indigo, and vegetable cultivation. It may seem ungracious to criticize in this manner the first efforts of the Board of Revenue to supply us with the statistics we have so long desiderated. But let us have honest work in their preparation. To be of any worth whatever, statistics must be real and not the semblances of things. It is a feature in these returns that they include for the first time a mention of fodder, as part of the harvest of the land,—

Acres	Produce
Kurbee or Joar stalk ...	1,956,911 24,498,448 Maunds

Are we to understand that this crop was a pure fodder crop, and that the grain was cut down with it for the cattle? It would certainly seem so, from the shape in which the fact is recorded. No mention, however, is made either of grass, or *bhoosa* (wheat straw). To complete these returns we require an estimate of both. When are we to congratulate Madras, Bombay, or Bengal, upon following this North-West example?

## THE LAND

To the Editor of the "Indian Economist"

DEAR SIR,—It is with much painful concern that I have observed how strenuously you urge the almost unlimited taxation of landholders in this country. Why a man who possesses land in this country should be prevented from laying out capital upon it by a prohibitive and exceptional system of taxation laid upon its returns to which no other class is subjected I am quite unable to see. The only reason apparent, and I fear the true one, is that the immobility of land places the profits derived from the use of it more readily within the grasp of the taxing power than those of other branches of industry. The facility which this mode of raising money presents, recommends it strongly to those in authority, and blinds them to its partiality and oppressive injustice, and the banking and commercial classes readily give it their support, because they see in the unlimited taxation of land an exemption from a portion of their own burdens. These parties assist the press and carry it with them, while the landholders, who are the victims, have neither the knowledge necessary for their defence, nor the power to make themselves heard. The system seems to me as rapacious as it is unjust. Its effect is of course to prohibit the application of capital to land for any purpose that will not yield twice the amount of profit expected from other industries. The theory on which it seems to be based, is that land, from something inherent in its own nature, gives a continually increasing profit to those who work it, independently of the capital and labour employed upon it. This is certainly a fallacy, and a very pernicious one. That land, as an instrument of production, has an inherent value of its own, is quite true; but when once that value has been determined, there is no reason to suppose that its productive power increases except in strict proportion to the capital laid out upon it. In cases in which its abstract value may have been rated too low, it soon, when cultivation is once in progress, becomes impossible to distinguish the portion of the profit derived from such deficiency in the estimate of its intrinsic value from that derived from the outlay of capital; and no attempt to rectify the defect by additional taxation can be made without danger of unduly reducing the legitimate return upon the capital. Of the effect of the periodical assessments so strongly deprecated a few years ago, but now so strenuously supported by a large portion of the press, my own case furnishes an example. I have landed pro-

perty which I greatly desire to improve by laying out money upon it; but I cannot expect a return in the form of increase of rent that will do more than pay me a moderate interest upon it; and with the prospect of that return being cut down in a few years by a new settlement, I cannot venture upon the outlay. Can a system be wise which compels a landowner to avoid the investment of his funds in his own land, and to select other securities in preference? It is exactly the same with the native zemindars. They will buy other land with the money they save, when they can get it at a price that will give them a certain return; but they will lay out nothing in the improvement of the property they already possess. They cannot do so with a new assessment looming in the distance, except when they can secure a rate of profit rarely to be obtained from any sort of outlay. As long as this system continues, agricultural prosperity will make little progress.

You have said that the people are profoundly content and happy with their leases (settlements?) I believe it is seriously and sadly the reverse. They feel bitterly that they are made the objects of an exceptional system of exaction which keeps them reduced to a mere subsistence, and hampers them in their efforts at improvement as no other class is hampered.

The Government may try to make a contented agricultural class by dispossessing existing proprietors and dividing the estates among the labourers employed to cultivate them, and may for a time succeed; but the success will be but brief, and will end in extending and confirming the dissatisfaction. These new holders, poor and lowly though they be, and happy at first in their new-born rights and possessions will soon fall into the same position, suffer the same grievances, and be the victims of the same discontent as their late masters.

I shall be very glad if anything I have been able to say shall lead you to reconsider the opinion you have expressed, and to look at the subject from a more varied and extended point of view than apparently you have hitherto done. It may be that you have not had the opportunity of testing, by practical experience, the correctness of the theories which have been your guide and by which (excuse me for saying) I think you have been misled.

AN INDIAN LANDLORD.

North West Provinces, January 1871

#### NOTE BY THE EDITOR.

The most simple, and perhaps the most effective, reply we can make to our correspondent, is to point out that the total amount the State is exacting from the land of all India is but £20,000,000 sterling a year. Call it rental, or a tax upon rental, or what you please, that is the amount of the exaction, and in the main the impost is precisely what it was 20 years ago. But in the interval a great revolution in values has taken place throughout the world, and we have spent £100,000,000 sterling upon railways and £50,000,000 upon roads and works of irrigation in the country, with the general result of seeing the export trade rise from £18,000,000 sterling a year to £70,000,000. Twenty years ago the value of the produce of the soil of India was perhaps £200,000,000 sterling, it is now we suppose not less than £400,000,000; and in these circumstances it is oppression, it seems, for the State to raise the rental. With all respect to our correspondent, we remark that his arguments are familiar to us as "household words." Not one of them will bear sifting.—Ed. I. E.

#### SHEWLA; OR SATURATED SOLUTIONS OF SEWAGE.

We are sorry to see so intelligent a man as Mr. Blaney, whose pamphlet upon *Drainage and Conservancy* ought to have been acknowledged last month, assisting to maintain the diffusion of the Bombay community that they cannot afford themselves a supply of pure water. "It is as much as the city can do at present to pay the interest on the loan incurred on account of the Vihar waterworks, and although it is true that these waterworks were badly executed and outrageously financed, the financial difficulty stares us in the face, and will continue to do so until this generation has passed away. In considering any

"scheme of additional water-supply for Bombay, the limit of our power to raise water-loans must be remembered. I am aware that the Health Officer makes his demand for more water on the grounds of the necessities of public health, but in this question he occupies the double position of sanitary officer and Justice of the Peace. Having decided the quantity of water required for the city in the first capacity, he will be required to show how it can be provided in the second." We can hardly persuade ourselves that this is Mr. Blaney's writing. Not afford a sufficient supply of pure water! A heavy responsibility rests upon the writers in the local press who have contrived to betray even the intelligence of their city into the belief that the Island cannot afford itself a proper supply of water. One of these writers has discovered that every man should be allowed to drink water out of his own cesspool if he choose to do so; while the other implores some good old Parsee to die and bequeath a fortune to the community to meet the public want. And now we have Mr. Blaney joining these old ladies, and helping to swell their cry. Look at these facts: Bombay numbers 800,000 people, and is the *entrepot* of a trade of thirty millions sterling a year. The place after all its losses, is still exceedingly wealthy, and its standard of living luxurious amongst the wealthy, and exceptionally high amongst the poor. It is difficult to estimate what the annual expenditure of the Island amounts to, but that it is many millions sterling a year is certain. Its bazaar and markets are crowded with productions which prove the unusually high standard of living amongst the people. They have everything in abundance. They deny themselves nothing. The markets are simply superb, and are supplied in the utmost profusion with fish, poultry, meats, fruits, vegetables, and a thousand articles of consumption unknown to the people in the interior of India. But one thing they cannot afford themselves—Water. This great tropical city, the commercial capital of the empire, the geographical capital of Asia—indeed of the old world, can afford itself everything but—Water. The wells and tanks of the place meanwhile are saturated solutions of sewage, to drink which is death.

Now, it has been discovered that when the foundations of the mountains were laid, a vast natural reservoir for the Island was built for it by the hand of God in the neighbouring hills, less than fifty or sixty miles away, a reservoir requiring but a solitary gap to be closed by the hand of man, to convert it into a vast lake capable of supplying the Island for all time with perennial fountains and streams to make it a paradise of the nations. But the people cannot afford it, although the cost of this grand work from first to last is estimated at no more than £1,250,000, or perhaps £1,500,000. As there happens to be no *providential Bakery* in the adjoining hills, the people do, somehow or other, contrive to find about £10,000 a day for their bread, but they positively cannot afford £300 a day for water! Was there ever such drivell forced upon the common sense of a community as counsel!

The total cost of giving the Island a permanent supply of water to meet all wants whatever, would be covered, it is admitted, by an outlay of £2,000,000 sterling. Thus—

Existing debt upon Vihar Works .....	£350,000
Estimate for Shewla reservoir .....	£1,650,000
Total .....	£2,000,000

Mr. Blaney is a sensible man, and we beg him, in Heaven's name, to look at these figures. Five per cent upon this outlay is just £100,000 a year, or £300 a day. We feel almost ashamed to carry the discussion beyond this fact. Look at what this Shewla reservoir would accomplish for the Island. It seems to be overlooked that the supply of water which it would place at the command of the Municipality would bring an immense income with it. The markets of Bombay are so important, that wherever water is to be got in its neighbourhood for the cultivation of fruit or vegetables, the rental of the land becomes enormous. Thus the market garden ground at Parali lets for Rs. 180 per acre. Now Shewla would not merely give Bombay 20 gallons of water per head per day for domestic use, but a vast supply for the irrigation of market gardens along the whole

course of the aqueduct. To our own mind, there is positive guilt in the wanton neglect by a great city like Bombay of so simple and inexpensive, and yet so grand a work, which lies to its very hand inviting accomplishment, for its own benefit first and then as an incentive and example to other cities. It is in the name, not of extravagance but of true economy and of common sense, that we insist upon the work being done. The petty schemes put forward by the engineers for patching up the Vihar supply are the devices of sheer incompetency, the proof of want of clear insight. Though Shewla were to cost five millions instead of one, it is doubtful whether the work should not be done. The man who uses the word "afford" in such an association as this is simply an idiot, when the real state of matters has been once pointed out. The Bombay community cannot, "afford" itself a supply of pure water, although it can afford a supply of everything else in abundance! £10,000 a day for bread, but not £300 for water. The secret of this folly is that the system of municipal taxation is altogether faulty, and requires radical reform. A most important beginning was made two years ago, when the Town Duties Bill was passed in the teeth of the Noddledom of the place. Dr. Blaney feels the municipal shoe pinch him, because cobblers made it, and not workmen. The system of water rates in Bombay is simply a fraud from beginning to end. Six or seven thousand men are made to find water for the whole 800,000, and the burden is of course very heavy. A general water rate, and a trifling increase of the Town Dues, are the right measures to take. Common sense and sound economy alike dictate the reform, and with it will come the Shewla reservoir with the thousand advantages and blessings it will bring the community. If Bombay could ship its publicists and obstructives on board ship, and send them a voyage round the world at the expense of the municipal treasury, it would be a very cheap outlay of public money. "The quack bootmaker is considerable, as corn-cutters can testify—but the quack political doctor!"

#### EDITORIAL NOTES.

THE Madras papers will, we trust, pardon our saying that they would do well to intimate the regularity with which the daily journals of Bombay publish the weekly returns of their Presidency Bank. Sometimes for weeks together no bank statement whatever appears in the Madras papers, and at others the same stale balance sheet is published day after day for weeks. The official *Gazette* is partly to blame, we observe, for the irregularity, but not wholly.

A LOCAL contemporary states that a Veterinary College is likely to be established as one result of the labours of the Cattle Plague Commission, and that a Chair of Agriculture will probably be added thereto. "This college, it is believed, will be placed under the control of the proposed Agricultural Department;" but where the college is to be formed is not stated.

We doubt if our contemporary is rightly informed. At all events we should think the model farm would be the proper place for the veterinary school.

ACCORDING to the last Administration Report (1869-70) eight hundred and thirty estates were sold in Bengal during the year for Rs. 17,973 arrears of revenue. The estates realised, we are told, Rs. 7,16,519. Of these, 58 estates assessed at Rs. 9,300, were purchased by Government for Rs. 64; while the remaining 772, assessed at Rs. 52,053, were purchased by private individuals for Rs. 7,16,455. The *Indian Daily Examiner* enquires if these sales were *bona fide*, or brought about by the superior holders merely to quash under-tenures? "It seems strange," adds our contemporary, "that estates, a number of which sold for the aggregate sum of Rs. 7,16,455, should be suffered to go to the hammer for Rs. 17,973." The price realized represents, we observe, about 14 years' purchase of the assessment.

THE uncertainty of Indian statistics is so great that it is almost idle to argue from them. According to the last Administration Report from Allahabad, the population of the North-West Provinces is made up as follows:—

Men.....	10,160,080
Women .....	9,194,668
Children under 12 years, Male ...	6,018,786
Female .....	4,718,414
	<hr/>
	10,792,800
	<hr/>
	30,086,896

It is almost impossible to believe that these figures are true. The approaching Census, upon which no pains should be spared, will lay the foundation, we may hope, for solid statistical researches.

WE noticed in our last issue that the acreage under cotton cultivation in the North-West Provinces this season and in Central India is in both cases somewhat wider than in 1869-70. In Madras, on the other hand, there seems to be a considerable falling off, the figure having fallen, according to the official *Gazette*, from 1,285,263 acres in 1869-70 to 1,074,563 acres in the present season 1870-71. It is impossible, however, to place any trust in these figures, as simultaneously with their appearance the Madras Board of Revenue publishes a report, in which the acreage under cotton in 1869-70 is declared to have been 1,604,028 acres, while the Administration Report for 1869-70 just issued, tells us that the area was 1,771,378 acres, exclusive of Malabar and South Canara! Now look at these variations:—

*Acreage under Cotton—Madras, 1869-70.*

According to last official <i>Gazette</i> .....	1,074,563 acres.
" to Board of Revenue .....	1,604,028 "
" to Administration Report	
(excluding Malabar and Canara). 1,771,378 "	

Commenting upon the Board's returns, a Madras paper says,— "It will be thus seen that the cultivation has about doubled "since 1852; and yet Manchester is not satisfied." If the official *Gazette* is correct, and the Madras Board of Revenue have reported faithfully the cultivation of 1869-60, there has been no increase at all during the ten years.

1859-60 According to Board of Revenue.....	1,076,658 acres.
1870-71 " to Official <i>Gazette</i> .....	1,074,563 "

Could anything be more unsatisfactory, or more discreditable, when we remember that our land revenue system gives us such peculiar facilities for obtaining exact information? We do not venture to give an opinion as to the respective claims of these conflicting authorities upon our belief.

"WHAT we really need," says a writer in the *Pioneer*, "as the foundation of solid improvement to agriculture and the land revenue, is a minute and comprehensive investigation by professional experts of the present actual condition of the land, and of the cultivating classes, their ways of cultivation, and their means. We shall then, and then only, discover surely what help they want, and we suspect that in many provinces it will be found that they mainly want money. However this may be, we are convinced that all further allotment of the public funds to industrial development should be preceded by an exact survey and scrutiny of the *status quo* of things as they are."

The writer overlooks, we think, that we have already a mass of minute information concerning the agriculture of the country in the Secretariates of India, that simply requires to be sifted and collated and summarised, not by "professional experts" but by men gifted with clear insight—Carlyle's *seers*. How can we reasonably expect to get from mere "professional experts"—for by the term, we suppose, our contemporary means "professional agriculturists"—information so full, so varied, and so minute as we already possess in the Settlement Reports of the country?

Bombay we know possesses reports upon the agriculture of its provinces not to be surpassed for the skill with which they have been drawn—reports 40 and 50 years old which have never been utilized to this hour. And every province of the country has simi-

lar reports buried in the recesses of the record rooms. It will be the business of the new department to disinter these reports at once. Six months of honest work, with a competent staff, would suffice to shew how valuable a mass of information we already possess, while the bringing together of these reports, and the work of comparing and classifying them would result in the discernment of great leading facts for our acceptance and guidance—that we may not for ever be beginning our work anew, repeating the same enquiries and the same errors over and over again. Let us use what we have already in our hands.

We observe that Mr. Blaney in his valuable and interesting pamphlet upon the drainage and conservancy of Indian towns, makes the following quotation from our columns:—The *Indian Economist* of September 10th 1869, says,—“We have not the smallest doubt of the possibility of raising a very considerable revenue in India from direct taxes. We have never doubted the possibility of doing so. What we have doubted and denied is the possibility of our ever raising a large revenue in India from indirect taxation, for the reason that the tastes of the people, and their standard of living, are very simple, and that the soil itself produces all they want at their own doors.”

The comment which Mr. Blaney makes upon this passage is as follows:—“In Bombay about eight or nine lacs of rupees per annum are derived from octroi duties. The testimony of the Duke of Argyll is to the following effect: ‘It is impossible in any country to reach the masses of the population by direct taxes.’ If they are to contribute at all to the expenditure of the State, it must be through taxes levied upon some articles of universal consumption. If such taxes are fairly adjusted, a large revenue can be thus raised, not only with less consciousness on the part of the people, but with less real hardship upon them than in any other way whatever.”

Mr. Blaney has understood neither the *Indian Economist* nor the Duke of Argyll, between whom there is complete accord upon this question. When the Duke of Argyll says that “it is impossible in any country to reach the masses of the population by direct taxes,” he means direct taxes after the European model, such as the Income Tax. He does not mean that you cannot reach the masses by a capitation tax. So, if Mr. Blaney will refer again to the *Economist* of 10th September 1869, he will find that we were simply denying the possibility of raising a large revenue in India through the Custom House, because no article of universal consumption passes through it, and affirming that a very considerable revenue might be raised by direct taxes “in the immemorial way of the country,” i.e., direct squeezing. Mr. Blaney can hardly have forgotten that Bombay owes its eight or nine lacs of octroi duty largely to ourselves, who pressed them upon the Bench at the cost of much personal obloquy, and the temporary loss of many friends.

THE results of the last half year's operations of the three State Banks of India, are as follows:—

	Paid up Capital	Half year Profits	Dividend
Bank of Bengal.....	Rs. 2,20,00,000	Rs. 6,81,259	5½ per annum.
“ Madras .....	58,25,000	2,16,430	7 “
“ Bombay .....	60,00,000	1,40,707	5 “

The amount of profit undivided, and the reserve funds of each Bank respectively, on the 31st December, were:—

	Undivided Profit.	Reserve. 31st December.
Bank of Bengal.....	Rs. 70,323	Rs. 15,67,789
“ Madras .....	25,665	5,82,500
“ Bombay .....	20,126	4,15,000

The resources of each Bank, and their employment were severally as follows:—

	Bank of Bengal Rs.	Bank of Madras Rs.	Bank of Bombay Rs.
RESOURCES.			
Capital .....	2,35,67,000	61,87,500	64,15,000
Government deposits...	3,01,51,000	19,52,100	51,08,000
Private deposits .....	8,11,84,000	1,15,30,000	2,28,09,800
Bank Post bills, &c.,...	3,64,000	11,62,000	12,22,000
	8,52,56,000	2,88,31,500	3,81,54,000

	Rs.	Rs.	Rs.
EMPLOYMENT.			
Govt. Securities .....	1,16,88,000	2,98,000	9,89,000
Loans on do. ....	58,29,000	24,45,000	18,48,000
Bills discounted .....	1,72,31,000	73,80,000	58,41,000
Cash Balances unem- ployed. ....	5,08,54,000	1,29,88,000	3,99,15,600
	8,48,31,000	2,90,77,000	3,80,27,000

The figures furnish a striking proof of the stagnation of trade in the country. Of the £15,000,000 capital and deposits in their hands, the three banks between them are barely able to invest £3,000,000, and have four-fifths of their resources lying unemployed in their coffers. The wonder is that they are able to declare any dividend at all, and shareholders may be congratulated upon their good fortune. The discount rates of the Bank of Bengal were unchanged throughout the whole six months under review. We cannot but think this state of matters indicates a want of enterprise or insight somewhere or other. Here are £12,000,000 of money lying unemployed in a country destitute of almost every mark of modern civilization, and in the heat of rich and populous cities, not one of which we believe possesses the simple luxury of a swimming bath.

ALMOST equal uncertainty seems to characterize the Bombay returns, if we may believe a local writer, who says: “The Commissioner's average estimate of 60 lbs. per acre would represent last year's crop of Kattiawar as 79,464 candies, or 156,928 bales, which, added to the ‘amounts realized’ in Broach, Ahmedabad, &c., make a total of 229,872 bales. And yet we know that 456,370 were received from these districts in that year, and the residue of Dholera, Veraval, &c., left behind at its close was unusually large.”

Messrs Robertson, Brothers & Co. simultaneously complain from Dharwar of the Cotton Commissioner's “astounding statement” that the production from the Collectorates of Dharwar, Belgaum, and Kulladghee will be only 53,150 bales as calculated greatly to mislead all persons connected with or interested in the trade of these districts. “We are at a loss, they say, ‘to understand how the Cotton Commissioner can estimate a general yield from a healthy crop at the low figure of 19 lbs. per acre, when in some parts the natives estimate 16, in others 12, and in the worst 4 maunds cuppas per acre, so that taking a low average of 6 maunds cuppas we must surely have 56 lbs clean cotton per acre. We do not know who supplies the Commissioner with his information regarding Dharwar, but the source is evidently not a reliable one. If the dumbul, mahalkerry, and ryote told the Collector that the rain had increased the disease of kurree-jeegee, and that the prospects of a much larger crop than last year were not very great, their object in saying so must have been to induce him to reduce their income tax or rent.”

Our agricultural statistics are at present so unreliable, that it is impossible to build any conclusion upon them whatever. In the meanwhile we give for what they are worth, the latest estimates of the acreage under cotton this season throughout the country:—

North-West Provinces.....	1,247,494 acres.
Central Provinces.....	768,781 “
East Berar .....	687,010 “
West Berar .....	802,417 “
Madras .....	1,074,503 “
Bombay (including Sind and the Native States) .....	4,020,422 “

The Cotton Commissioner affirms the Bombay area to be 545,063 acres below the average of last season. No estimates as yet have been received from the Punjab. Neither Oudh nor Bengal ever attempt any, nor, indeed, keep any record whatever of the cultivation.

THE prices realized at the opium sale of 9th instant were as follows:—

	Quinta.	Highest.	Lowest.	Average.	Proceeds.
Behar .....	2,625	1,165	1,155	1,158-1-0	20,98,350
Benares .....	1,665	1,140	1,130	1,134-9-3	18,99,071



Prices have been comparatively steady at about these quotations for many months past, and as the estimates of the year were based upon an expectation of 975 Rupees per chest on 49,000 chests, the actuals will thus prove better than the estimates by seventy-five lakhs; and as 59,000 chests are announced for sale during the present year in place of 49,000, opium, in so far as Bengal is concerned, will show favorably in the coming budget. If Sir Richard Temple bases his expectations upon a probable receipt of Rupees 1,050 per chest, which we should think a safe figure, the estimate will stand for the coming year at Rupees 5,46,00,000 instead of the Rupees 4,77,00,000 of last budget. The yield of the Malwa drug, if not quite so favorable, still promises to exceed the estimates. Up to date of 14th instant 33,881 *passes* had been granted during the current financial year which, at 800 Rupees the chest, will exceed the £20,00,000 estimate of the budget. Should the drug come forward as freely during the remaining six weeks of the present year as it did in 1870, there will be 6,000 more *passes* wanted, and the Malwa actuals will exceed the estimates by 30 or 40 lakhs.

Upon the whole, the financial prospects of the new year are bright, and although we do not ourselves feel, as we have said, at liberty to urge the total abolition of the Income Tax, the fact that the opposition to it is universal and bitter, should have great weight in the eyes of Government. "The true end of legislation," says Edmund Burke, "is to follow, not to force, public inclination. It would be dreadful, indeed, if there was any power in the nation capable of resisting its unanimous desire, or even the desire of any very great and decided majority of the people. The people may be deceived in their choice of an object, but I can scarcely conceive any choice they can make to be so very mischievous as the existence of any human force capable of resisting it." When Government and the people differ, Government is generally in the wrong." So, too, in 1772, when speaking on a Bill respecting the import and export of corn, the profound and eloquent statesman said,—"I give way to the present Bill not because I approve of the measure in itself, but because I think it prudent to yield \* \* \* the people will have it so, and it is not for their representatives to say nay."

These words embody such profound wisdom that we would press them upon Lord Mayo's notice. There can be no doubt whatever that the people are opposed as one man to the Income Tax. Well, whether they are right or wrong is no longer the question. "The proper business of a statesman," says Mr. Buckle, "is to contrive the means by which certain ends may be effected, leaving to the general voice of the country to determine what those ends shall be, and shaping his own conduct, not according to his own principles, but according to the wishes of the people for whom he legislates, and whom he is bound to obey."

With whatever limitations we may hold this doctrine in India, the passage embodies a great principle for the statesman's guidance. Feeble and shallow men spend their little force in resisting the popular wish till they find themselves at length compelled to yield in the midst of deserved odium, where a statesman, by prompt and graceful concession, puts himself at the head of the movement, for that guidance and control which are at once granted him by popular acclaim. Lord Mayo has done a wise thing in the issue of the late Financial Resolution. We think he would be well advised were he now, without sinking, or professing to sink, his own convictions, to repeal the Income Tax in deference to what is plainly the universal wish.

### SILK.

#### RAW PRODUCTS IN DHARWAR.

The following letter has been addressed by Dr. M. M. Mackenzie, Superintendent of Jail, Dharwar, to the Secretary to Government, Revenue Department, Bombay, dated 15th August 1870:—  
I have the honor herewith to submit, for the information of His Excellency the Governor in Council, a printed summary of my efforts in sericulture, the utilization of the wild aloe, and to

a certain extent also of other plants or shrubs producing fibre; and these experiments, with silk and aloe, date from 1866, but with the other articles only from this and the preceding year.

### SILK.

When I first commenced my experiments in silk culture, I had no idea that I would carry them out so extensively; but as I found my efforts rewarded, and success undoubted, I was encouraged to go on with them from year to year; but had I in the outset deemed that such would have been the case, I would have submitted regular detailed reports to Government direct.

2. I now beg to present them in a complete form, brought up to the end of June of this year, and being now convinced by practical experience of the capabilities of this climate for a great remunerative and successful extension of such works, I will leave it with Government or private parties to carry them out to their full extent, but I will retain only a few of the silkworms for the benefit of any who may desire to have them.

3. My previously reported experiments date from June 1866 to September 1869, and this last one from October 1869 up to the end of June of this year, giving respectively three trials of ten, six, and eight months.

4. In order to satisfy myself that my former anticipations and deductions were correct, not only as to the actual production of silk, but through care and attention as to the possibility of a gradually increasing yield, I set apart equal quantities of cocoons chosen promiscuously from each experiment, and the results I beg to present in a tabular form, giving the results as per lbs 100:—

#### Statement showing Results compared with the previous Experiments.

##### FIRST EXPERIMENTS DURING 10 MONTHS

Weight of Cocoons.	Weight of Raw Silk.	Yield per Month.	
		Cocoons.	Raw Silk.
lb. oz. dr. 88 5 8	lb. oz. dr. 5 15 0	lb. oz. dr. 8 13 0	lb. oz. dr. 0 9 8

##### SECOND EXPERIMENTS DURING 6 MONTHS.

Weight of Cocoons.	Weight of Raw Silk.	Yield per Month	
		Cocoons.	Raw Silk.
lb. oz. dr. 57 5 0	lb. oz. dr. 4 15 8	lb. oz. dr. 9 8 0	lb. oz. dr. 0 13 4

##### THIRD EXPERIMENTS DURING 8 MONTHS

Weight of Cocoons.	Weight of Raw Silk.	Yield per Month	
		Cocoons.	Raw Silk.
lb. oz. dr. 113 6 12	lb. oz. dr. 11 4 12	lb. oz. dr. 14 2 0	lb. oz. dr. 1 6 9

#### Statement showing proportionate Results compared with previous Experiments.

First Experiments, 10 months.		Second Experiments, 6 months		Third Experiments, 8 months	
Cocoons.	Raw Silk.	Cocoons.	Raw Silk.	Cocoons.	Raw Silk.
lb. oz. dr. 100 0 0	lb. oz. dr. 6 11 0	lb. oz. dr. 100 0 0	lb. oz. dr. 8 11 0	lb. oz. dr. 100 0 0	lb. oz. dr. 9 15 0

The above shows a steady increase in each period, the last yielding 3 lbs. 4 oz. over that of the first.

5. As in previous reports, I now also append a statement of the monthly yield for the past eight months, showing a product of 11 lbs. 4 oz. 12 drs. raw silk out of 113 lbs. 6 oz. 12 drs. cocoons, and which, after deduction of convict labor, leaves a profit of Rs. 48-6-0 out of Rs. 90-6-0, or a clear profit of 110 per cent. on the value of the labour; these rates are of course based upon convict labor, which is taken at an average of two annas a day, or 3d. in English money. Of course even with free labor all of it can be carried out by the employment of women and children, except the throwing or throwing operation, i. e., removing the silk from the cocoons; this individual (and only one is employed in the jail) may be put down at 12 annas, while in the non-working intervals he may well act as general supervisor. The usual labor rates in these districts are, for male adults, from 3½ to 4 annas per day, women 2½ to 3 annas, and for children, from 1 anna to 1½. Carrying the experiments on still further through their bleaching, washing, and dyeing processes, and taking the Hoollee

market rate of dyed and dressed silk at Rs. 18 per pound, it gives a profit, after deducting the convict labour, &c., of Rs. 115-15-6, or 132½ per cent. on the outlay.

TABLE No. 1

Result of Silk Cultivation in the Dharwar Jail from October 1869 to June 1870 inclusive,—eight months.

Months.	Weight of Cocoons.	Weight of Raw Silk.
	lb. oz. dr.	lb. oz. dr.
October .....	4 6 4	0 8 8
November .....	28 5 8	2 14 0
December .....	1 15 0	0 2 8
January .....	5 8 0	0 7 4
February .....	21 5 0	2 10 8
March and April .....	25 6 0	3 1 8
May .....	6 1 0	0 10 0
June .....	20 8 0	0 14 8
Total .....	113 6 12	11 4 12

TABLE No. 2

Statement showing Results of the above as worked at the Dharwar Jail.

## RAW SILK.

	RS. A. P. RS. A. P.
Value of 11 lbs. 4 oz. 12 drs. Raw silk at Rs. 8 per lb. ....	90 6 0
Deduct—	
Convict labor, collecting leaves, feeding worms, &c., 208 aggregate number of days, at 2 annas .....	26 0 0
Throwing paid at Rupees 2 per month, or 24 working days in all .....	16 0 0
	42 0 0
Profit on raw silk .....	Rs. 48 6 0
110 per cent. profit on outlay for labor	

TABLE No. 3

## DRESSED AND DYED SILK

	RS. A. P. RS. A. P.
Value of 11 lbs. 4 ozs. 12 drs. dyed silk, at Rs. 203 0 0	
Deduct—	
Loss in weight while bleaching, at 4 ozs per lb. ....	50 13 0
Convict labor, carding, twisting, unwinding 112 aggregate number of days, at 2 annas .....	14 0 0
Bleaching and dyeing, at Rs. 2 per lb. (Hoochlee rate) .....	22 9 0
	87 6 0
Profit on dyed silk .....	Rs. 115 15 6
132½ per cent. profit on outlay for labor and loss of weight	

6. If free labor is utilized, the profit on raw silk for the outlay, as will be seen from Table No. 4, will be Rs. 46-6-0, or 105½ per cent. on outlay for labor.

7. Dyed and dressed silk by free labor will give, as shown by Table No. 5, a profit of Rs. 73-15-6, being at the rate of 57 per cent. on the outlay for labor and loss.

8. It will be observed that while dressed and dyed silk carried on by convicts gives the highest profit, the profit is smaller with free labor, the latter being so much higher than the former as to daily wage.

TABLE No. 4

Statement showing probable Results of the above worked by free Labor.

## RAW SILK.

	RS. A. P. RS. A. P.
Value of 11 lbs. 4 ozs. 12 drs. raw silk, at Rs. 8 per lb. ....	90 6 0
Deduct—	
Labor for collecting leaves, feeding worms, &c., 208 aggregate number of days at 2 annas .....	26 0 0
Throwing 24 days, at 12 annas .....	18 0 0
	44 0 0
Profit on raw silk .....	Rs. 46 6 0
105½ per cent. on the outlay for labor.	

TABLE No. 5.  
DRESSED AND DYED SILK.

	RS. A. P. RS. A. P.
Value of 11 lbs. 4 ozs. 12 drs. dyed silk, at Rs. 18 per lb. ....	203 5 6
Deduct—	
Loss in weight while bleaching, at 4 oz. per lb. ....	50 13 0
Labor for carding, unwinding, and twisting, 112 days, at 8 annas .....	56 0 0
Bleaching and dyeing, at Rs. 2 per lb. (Hoochlee rate) .....	22 9 0
	129 6 0
Profit on dyed silk .....	Rs. 73 15 0
57 per cent. on labor and loss.	

9. From the above it will be seen that there would be a profit of 105½ per cent. on the outlay for wages in the production of raw silk.

10. From this would have to be deducted rent of buildings, machinery, cultivation of the mulberry tree, taxes, &c., and which, if required, I may calculate at a future term.

11. I trust that the foregoing statements will tend to prove that my previous anticipations were correct, viz., that by ordinary care and attention to the mulberry plants, keeping up for the worms a full, healthy, and liberal supply of leaves, and by the proper regulation of the ventilation and temperature of the breeding-rooms, the animals will give an increased yield of good silk, although up to what point further experiments only can determine; much will, I fancy, depend on the species tried.

12. Whether other varieties of the worm will succeed here I know not, as the nature of my position and duties obliged me to be contented with those I have (monthly variety), and which have never at any time since 1866 shown the least tendency to disease or decay.

13. From my previous observations regarding silk production in not only France, Italy, and Switzerland, but in India, China, and Japan, I am more and more convinced that climatic influence has much to do with the successful rearing of the mulberry, as well as that of the worm in all its stages. I have not yet heard or read of any climate in Europe or Asia where some blight or disease did not occasionally attack either the mulberry tree or leaf, and in which extremes of heat, cold, or long-continued damp did not tend to destroy the worm in some period of its growth.

14. The climate of Dharwar is such that all the year throughout it never gives extremes, while the rainfall is spread over almost every month in the year. With such a climate I feel sure that the successful rearing of so delicate an animal as the silkworm would be undoubted, for it is excess of heat, cold, or long-continued damp that has caused the great failures that I have heard or read of in this branch of industry.

15. Should further experiments be made, I would hold out the warning that, if other species of the worm are introduced, they be not mixed up completely with those we now possess, but that a gradual acclimatization be first carried out separately. This will more especially be requisite if other breeds are introduced from a very high latitude, and to the fact of this not being attended to, am I disposed to attribute the great failure of Monsieur De Vecchi's experiments in Mysore a year or so ago (page 16).

16. Finally, while urging that further efforts be made here in sericulture, I do so on the results of my experiments carried over several years, and I found my reasons for this success on the following main points (repeated from page 11), all of which Dharwar possesses in a high degree:—

1. A medium degree of moist tropical heat.
2. A comparatively (for India) slight fall of rain throughout the year, never severe or long-continued in any one month, but spread fairly over almost every month in the year.
3. A slight variation in the temperature, not only by night and day, but all the year throughout.
4. Hot season never excessive or of long continuance.
5. Soil rich black or red, and of good depth.
6. Ample water supply in the event of very slight or capricious rainfall.

The following articles have been manufactured in pure silk, dyed of various colours, and always found a ready sale:—

Thirty-one scarves of various sizes.

Dhoturs for the use of Natives, each 12 × 3½; these have been merely made with some gay silk border on either side. Cholees for women, half silk and half cotton, usually of a black and red stripe.

17. Ova have at various times been sent via the ordinary letter-post and otherwise to Khandeish, Ahmedabad, Commissioner Central Provinces, and to Cochin. At the two former places they hatched, but shortly died, perhaps from climatic changes, or want of proper care, food, &c. In the Central Provinces they have, I hear, succeeded well, and I believe at Cochin also. The hatching of the egg of this species is, however, such a brief and rapid process (eight or nine days) that great expedition in transit is a *sine qua non*, and this we cannot

always insure; much also depends on the season of the year, and the state of the weather while in transit, and when hatching.

*Dharwar temperature and rainfall for nine months, from Oct. 1869 to June 1870, continued from page 12, Silk Report.*

Months.	Average Max. min.	Average Min. max.	Fall of Rain.	Average monthly fall of Rain.
October, 1869	89	69	Ins. Cts.	Ins. Cts.
November "	87	60	5 53	
December "	90	63	0 95	
January, 1870	93	64	2 46	
February "	93	68	0 38	
March "	99	69	.....	
April "	100	68	0 22	
May "	8	68	1 29	
June "	92	69	0 55	
			5 45	
Total,....	841	597	16 83	
Average,....	93	66	.....	1 87

Mean of extreme monthly reading for nine months, from October 1869 to June 1870, inclusive.	Mean of extreme Maximum, Medium, and Minimum for the above period.			Fall of Rain.	Average Monthly fall of Rain.
	Maximum	Medium	Minimum		
60°	100°	80°	60°	Ins. Cts.	Ins. Cts.
				16 83	1 87

#### SERICULTURE IN BENGAL.

Read the following communication from Mr. G. DeCristoforis in reply to the remarks of Captain Thos. Hutton, submitted at the last monthly meeting:—

"Permit me to address you a few lines for communication to the Society, in answers to some remarks reflecting on myself, made by Captain T. Hutton in his letter to the Agricultural and Horticultural Society printed in the *Englishman* paper of the 22nd instant.

When I said that "no annual worms will hatch regularly, unless they are submitted to the changes of the four seasons in a temperate climate, from the heat of a summer to the cold of a winter below zero," I alluded to the Centigrade not the Fahrenheit. The climate of Mussoorie, ranging from 26 to 82° Fahr. ought to be well adapted.

"In saying that the annual eggs of Bengal are kept well protected from the air in earthen pots (which are cool and porous), I was not advocating my own views, but was simply stating a method adopted by the natives of Bengal for the preservation of the annual worms, since perhaps these have been introduced in the country; and I fail to perceive the drift of Captain Hutton's comparison between a man and a silk-worm egg, unless it is meant for witticism.

"Captain Hutton's plan of breeding the worms in a more favourable climate than Bengal, and then ..... both cocoons and eggs to those willing to cultivate them carefully, will do very well for the annual cocoons; but what is most vital and Bengal (where mulberry is cut four or five times during the year), and ought to attract the attention of all practical men, should be the improvement of the monthly or Pouvottine worms in Bengal itself. The native method of buying seed cocoons, getting the eggs, and rearing the worms, is full of mistaken notions and practices, and if an experimental silk farm, under intelligent and practical management, should be established in the centre of the cocoon-producing districts of Bengal by the aid of Government and the silk manufacturers, it is certain that good results may be obtained tending to improve the quality of these monthly species by the distribution of the cocoons or eggs produced in the farm."

In connection with the subject of silk, the Secretary next read the following letter from Mr. Charles Brownlow of Cachar, and stated that he had received the cocoons therein referred to, and that they had been divided between Captain Hutton of Mussoorie, the Acclimatization Societies of Melbourne and Sydney, and the Austrian Italian and French Consulates:—

"I beg to advise you of my being about to despatch to your address a box containing 71 Atlas cocoons (live), which I trust you will cause to be distributed to parties likely to make experiments on rearing the silk. You will be the best judge of who will be likely to turn them to account, but I would suggest batches being sent to the Australian, Austrian, and Italian Governments, Captain Hutton, M. Gerin De Meneville, &c.

"I shall shortly send for the Agricultural and Horticultural Society's report, on account of the rearing of the brood in open air, in which process from first to last I met with no misadventure; the worm is evidently very docile and tractable.

"A batch of ten cocoons would be enough for experiment, and would yield at least two or three females, which at the rate of 400 eggs each, and allowing casualties, would consume the foliage of a couple of large trees, if not more.

#### THE BOMBAY COTTON CROP, 1870-71.

##### GENERAL REMARKS BY THE COTTON COMMISSIONER.

**NORTHERN DIVISION.**—Of the Guzerat collectorates, Broach is the only one in which there has been a smaller breadth of land cultivated with cotton this season as compared with the last; but taking them together, an increase is noticeable to the extent of 113,514 acres. In my remarks on the return of cultivation published on the 28th of November last, I observed that the condition of the crop in the above collectorates was generally favourable up to that date. A period of cloudy weather set in soon after in some of the districts, and slight showers fell in Broach and Surat, causing some injury to the cotton crop, although the heavy rainfall in Surat and the neighbouring districts at the end of December was reported to be rather beneficial to the crop than otherwise. At that time it was anticipated that considerable damage would be occasioned by the boll-worm which had made its appearance in Broach, favoured, it was supposed, by the continuance of cloudy weather, but a subsequent report from Mr. Stormont describes the damage as so very limited in its extent, that there was reason to believe that the earlier exports would generally be much freer from stain than was the case last season. When the late rainstorm passed over Bombay in the middle of January, the weather in the districts of Surat and Broach became cloudy, with every indication of rain, but only a few light showers fell, and the weather has been fine ever since. Notwithstanding the drawbacks abovementioned, the season in the four collectorates of Guzerat may be described as on the whole favourable for cotton; as regards both quantity and quality, a fair average crop may be looked for. It will be seen that the quantity of cotton expected from the above collectorates amounts to 36,146 candies (equal to 72,292 pressed bales,) which on an average gives the very moderate estimate of 45 pounds of clean cotton per acre.

There has been an increase in the area of cotton cultivation in Khandeish amounting to 75,298 acres more than the preceding year. In the return published on the 26th of last November, the increase was stated to be only 70,222 acres; the difference of 5,076 acres, as shown in a statement since received from the Collector, is due to the addition of the cotton area in Inam lands and alienated villages, which was not included in the former return. Since the Collector's remark was recorded on January 14th to the effect that the weather has been fine since November, heavy rain has fallen throughout the district, commencing on that very day, the average rainfall from the 14th to the 16th of January having amounted to as much as 4 inches. The Collector thus describes its effect upon the cotton crop:—"The greater part of the cotton had been picked before the late rain fell. Perhaps about 5 per cent. of it remained in the fields; that of course has been seriously damaged as well as the outside portion of what was stored in the kullies and on the house-tops. The quantity damaged is comparatively small. If it could only be kept separate, the injury would be trifling, but in the present unsatisfactory state of the law, it will be used to adulterate the better kinds of cotton with impunity."

The estimated yield of cotton entered in the present return for Khandeish is equal to about 82 pounds of clean cotton per acre, or nearly double the average quantity expected from the collectorates of Guzerat.

For Nassick no return has yet been received showing the extent of land devoted to cotton this season, and no idea can therefore be formed of the largeness or smallness of the estimate submitted. The statement from which the particulars entered in the present return are taken, exhibit a great difference in the yield for 1869-70 as compared with the return of last year, the estimated yield then being nearly 700 candies more than that now shown. No explanation of this difference has been offered by the Collector, but possibly it may be due to territorial adjustments made when the collectorate was being detached from Khandeish.

**SOUTHERN DIVISION.**—In the collectorates of the Southern Maratha country, the season has unhappily been on the whole a very unfavourable one. The remark of the Collector of Dharwar that it may turn out better than last year is certainly not very encouraging, considering what a bad season that of 1869-70 also was, and that the out-turn of cotton then realized in Dharwar hardly amounted to one-fourth part of the estimated quantity. A further report received from the Collector regarding the effect of the rain in the middle of January, which appears to have extended also to these districts, states that in the Dumbul Petta (where the Collector was encamped at the time) the mahalkurys and ryots were of opinion "that the rain had not damaged the country crop; but that as much of the New Orleans was suffering from kurree-jee-gee, the rain had done damage, it having

rendered the disease more general and severe than before. Referring to the same period, the first Assistant Collector in charge of Kulladghie writes, under date the 27th January, as follows:—"I was at Moodibehal when the rain fell, and have since been to Hoongoond via Tangurjee to Elkul and Heera Mulgaon, and thence to this place (Ameengud), and everywhere the crop seems much injured. The plants, especially the New Orleans, appear to have suffered much from blight. The ryots state that the damage is general." The extent of land sown with cotton this year in Dharwar, Belgaum, and Kulladghie, is less by 358,256 acres than the area of the preceding season, the total estimated yield being 26,575 candies (53,150 pressed bales), equal to only about 19 pounds per acre.

Excessive rain in the month of October had an injurious effect on the cotton crop in the collectorates of Poona, Ahmednuggur, Sholapore, and Sattara. Considerable damage is also reported to have been caused by the rain of January in Poona and Sattara. The total breadth under cotton this season in these four collectorates is 191,309 acres, from which the yield expected is estimated by the Collectors at about 6,531½ candies (13,063 bales), which gives an average of nearly 27 pounds of clean cotton per acre. These figures do not include the cultivation in the Jutt Ilakaba, under the political agency of the Collector of Sattara. For this state a return has lately been received from the Collector, which shows that 11,700 acres have this season been cultivated with indigenous cotton. No estimate of the yield has, however, been offered, but assuming that the effects of the season have been here the same as in other parts of Sattara, the yield may be put down at the same rate, or 21½ pounds of clean cotton per acre, which would give a total yield of 321 candies, equal to 642 pressed bales.

Among the native States, owing to drought at the beginning of the season and excessive rain towards its close, the cotton crop in Akulkote has turned out, as the Political Agent remarks, "almost a complete failure," the expected yield being scarcely one pound of clean cotton per acre.

In Cutch and Pahlunpoor, where the rainfall is reported as insufficient, the estimated yield of clean cotton is equal to 40 pounds per acre; in Kolhapoor, where the crop is stated to have suffered from excessive rain, the yield is estimated at a quantity averaging 69 pounds per acre; while in Rewa Kanta where, as the Political Agent remarks, the cotton crop grown with other crops promises favourable results, the estimated out-turn of clean cotton is equal to 108 pounds per acre.

The native States, for which no returns of estimated produce have been received, are the same as those for which no returns of cultivation had been furnished at the date of the publication of the general return of last November, namely Kattiawar, Baroda, and the Mahee Kanta. Since then, however, a statement showing the extent of land under cotton cultivation in Kattiawar has been received from the Political Agent. From this statement it appears that instead of a falling off in the breadth of land under cotton, as supposed in my remarks on the above general return, an increase has taken place in all the districts of Kattiawar except the State of Bantwa, regarding which Colonel Anderson remarks:—"The decrease in the extent of cotton cultivation here is owing to excess of moisture in the early part of the rainy season, which destroyed some crops; but the prospects of the season are good." On the whole, however, there has been an increase amounting to as much as 136,876 acres, the total acre under cotton being 1,175,205 acres, against 1,038,329 in the preceding year.

From the weekly reports hitherto published it will have been seen that the season in Kattiawar has been in some respects unfavourable for the growth of cotton. Want of rain, the attacks of worms, and a disease in the plant called *cheetree*, are among the causes which are stated to have injuriously affected the crop in some of the districts, and the estimates given of the expected yield mention the probable quantity as, on the whole, rather less than three-fourths of an average crop. Calculating the amount of produce in all the districts of Kattiawar according to this estimate, at 45 pounds of clean cotton per acre, which may be said to represent about three-fourths of an average crop, we should have 67,454 candies of cotton, equal to 134,908 pressed bales, as the yield of the whole of that province for 1870-71.

In the continued absence of returns showing the breadth sown with cotton in Baroda and the Mahee Kanta in the present season, we can still only assume that the area is in the same proportion to that of last year as is the rest of the cotton area of the Presidency, of which we are in possession of returns for both years. According to this proportion the cotton area of this season in Baroda and the Mahee Kanta would be 175,901 acres; and as the prospects of the cotton season may be supposed to be the same as in the contiguous districts of Ahmedabad, Kaira, and Broach, the yield would probably be on the average about equal—that is to say, it would amount to about 40 pounds of clean cotton per acre, or altogether 8,330 candies, equal to 17,675 pressed bales.

No return has yet been received for Sind, but from the periodical reports submitted by Mr. Strachan it would appear that

the area in that province devoted to cotton this season is hardly less than that of last year, and that the yield in comparison with the produce of past seasons is good in quality and abundant in quantity. The only district in which there has been a falling off is the Dadoo talooka, where the area sown was about 803 acres, while, owing to want of rain, the return of clean cotton is hardly expected to amount to half a maund (40 pounds) per acre. Picking in general was finished some weeks ago, and the cattle turned out into the cotton fields to graze, but in some places a further picking was expected from plants, which having been sown late, had not yet quite matured their pods. With regard to these a report, dated 30th January, has just been received from Mr. Strachan, who states:—"Last Monday's frost has, I regret to say, killed all the late green plants. The loss throughout the length and breadth of the collectorate (Hydrabad) will amount to a good many maunds of staple, and though it would have been none of the best quality, it is a loss to the growers, but I hope also a lesson to make them sow earlier, when they have water and weather convenient. Fields sown by the first or second week of June were all safe in this neighbourhood." "The climate of Sind," Mr. Strachan goes on to remark, "is one of extremes. In summer we have a burning sun, and a dry, scorching, dusty wind; in winter we have a strong, cutting north wind, and occasionally frost, with little or no rain throughout the whole year, except in districts along the coast. Our cultivating season is limited from the time the flood of the Indus rises high enough to fill the canals till the time the frost sets in and kills our cotton plants; so, if the early part of the season be not taken advantage of for sowing the cotton crop, a full return cannot be expected." The main portion of the crop was, however, sown early, and it is expected that the produce when cleaned will amount to between 160 and 180 pounds per acre. The cotton area in Sind last year was 57,733 acres. Taking the same figure for this year, and deducting the area (803 acres) sown with cotton in talooka Dadoo, the total yield at, say, 170 pounds per acre, would amount to 12,345 candies, equal to 24,690 pressed bales, in addition to 41 candies or 82 pressed bales for the talooka abovementioned.

In accordance with what has been stated above, the following may be taken as the total contribution to the cotton trade from the produce of the Bombay Presidency in 1870-71.—

#### NORTHERN DIVISION.

Collectorates of Guzerat	...	86,146	candies.
Khandeish	...	64,439	"
Nassick	...	879	"

#### SOUTHERN DIVISION.

Collectorates of Southern Mahratta	...	26,575	candies.
Poona, Ahmednuggur, Sholapore, and Sattara	...	6,531½	"

#### NATIVE STATES.

Akulkote	...	10½	candies
Cutch and Pahlunpoor	...	10,240	"
Kolhapoor and other States of Southern Mahratta Country	...	17,683	"
Rewa Kanta	...	1,080	"
Kattiawar	...	67,454	"
Baroda and Mahee Kanta	...	8,939	"
Sind	...	12,386	"

Total ... 261,852½ candies.

or 508,705 bales of 3½ cwts. each.

This exhibits an increase over the estimate of the anticipated amount of produce for the year 1869-70, which was expected from the collectorates of the Presidency and the adjoining native States, as published in the Supplement to the *Government Gazette*, dated Wednesday, 26th January 1870, and which amounted to 416,514 bales, not including, however, Kattiawar and Baroda, for which no returns had been received. The estimate now presented does not of course include the cotton brought to the Bombay market from the Port of Bombay and other places, the contributions from which are included in the exports from the port of Bombay.

G. F. ...  
Bombay, February 8th, 1870.

#### MINERAL RESOURCES.

##### COAL IN SOUTH INDIA.

We have been favoured with a copy of the following interesting letter from Dr. Hunter, the Superintendent of the Madras School of Arts, to a Mysore official, regarding the mineral resources of Southern India. What the Doctor says about the indications of coal is at the present time of especial interest.

Madras, 29th Dec. 1870.

"I was glad to see your handwriting again, and more espe-

qually in a number of ways with the mineral resources of Southern India, as we are very busy in a quiet way exploring several districts with the assistance of the Board of Revenue and the collectors, scientific collectors, and officers of the Engineers and Department of Public Works. The first thing that has struck me is the great abundance of the metals, with sandstones, shales, and limestones; next the enormous quantities of porcelain materials, colored clays, and substances useful for pottery. These we have been attempting to utilize for many years, and I hope that ere long we shall be able to disseminate a good deal of practical knowledge in the manufacture of good kinds of stoneware, glazed pottery, building, draining, and ventilating materials, and articles suited for culinary, domestic, and sanitary purposes. The materials for making, glazing, and coloring these are to be found in almost every district in Southern India, but the great want for utilizing them is the discovery of coal, and to this our attention has been directed for some eight years past, and with better success than I at first anticipated.

"Colonel Haig has found coal in extensive beds on the Tal river and the Godavery. Colonel Applegath is boring for coal on the banks of the Kistna, and has come to very good indications. Black limestone, grey shale (like the pins of our Scotch coal fields), sandstones with soft slates, and impressions of plants very like those of the Burdwan and Talcheer coal strata. Mr. Boswell has found better indications, I think, of the same coal field, further up the Kistna and in the Palnad, Guntoor, and Datchpilly talooks. The same beds appear to extend into the Guntoor, Nellore, and Cuddapah districts, where they are accompanied by all the proper mineral and metallic indications of coal, and now that attention is being drawn to the subject, the proper fossils and sandstones are turning up not only in these districts, but in several others where we had very little expectation of finding them. I will enumerate all these. I have been getting minerals sent to the School of Arts for the last fifteen years in very large quantities by carts, steamers, ships, the railway, and canals, often in twenty to thirty tons at a time, and usually accompanied by a few baskets-full of the stones, clays, metals or minerals which occur in the immediate vicinity. This has given me opportunities for ascertaining a good deal about the mineral and metallic wealth of Southern India. I will tell you more about the metals hereafter, if you and some of your friends, the superintendents of divisions in the Mysore territories, will kindly try to assist us, which they can easily do at a very trifling expense, through some of the native subordinates. The latter seem in general to be well acquainted with all the metals of their districts, and they can soon collect samples of them with the assistance of a couple of coolies, a pickaxe, hammer, and mummatic.

"In this letter, however, I will keep to coal and its indications, telling you where search ought to be made, and in what districts, and amongst what strata. Now-a-days it is universally admitted that coal is far more widely disseminated than was thought to be the case about thirty years ago, and that it is not confined to the true carboniferous strata, though it is always amongst them that the thickest and richest seams occur, but almost invariably at great depths. I must classify these suggestions under the three heads of the—

1. Geological indications of coal.
2. Mineralogical ditto.
3. Miner's and coal-viewer's indications.

"It is a melancholy fact that there are still great disputes between men of science and miners and mineralogists, about what are the best indications of coal. I will give you these concisely. The geological indications of the best qualities of coal, viz, the *buthracite*, or jetty coal, stone or cannel coal, and rich bituminous coal, are trap or basaltic rocks alternating with sandstones, soft or hard slates, shales, millstone grits, magnesian limes, or tuffaceous limes, and white and yellow ochrey clays. These strata usually rest upon gneiss mica schists, rolled pebbles of jasper, quartzite, and the debris of granite rocks or those of primitive formation; and as soon as the older solid granites are reached, it is thought unnecessary to make further search for coal. Amongst the slates, shales, and sandstones of the true coal formations, there are usually found vast deposits of vegetable remains; plants resembling tree ferns, club mosses of a large size, and smaller plants of genera nearly all now extinct, though their representatives are still to be found in tropical climates. The shells and the crustaceans which occur amongst the true coal formations also belong to genera and species a good many of which are now extinct. Besides the true coal formations, there are others which bear coal beds, as the new red sandstone or trias deposits just above coal, the magnesian limestone or dolomites, and the lias oolite, cretaceous and tertiary deposits; but the beds of coal found in these, though often very extensive, are seldom so thick or of such good quality as the first series which is most largely developed in England, Scotland, Ireland, and North America. The other series, as the lias, oolite, and tertiaries, and also the lias oolite, are extensively deposited in France, Germany, Austria, Hungary, parts of Russia, and North America. The geological

indications which accompany them are extensive deposits of sandstones, bones, or whetstones, soft grits, clays, lithomarge, and sand with gypsum and fossil trees on the surface, usually more allied to the diatrypa, or branching trees, now existing. The shells are both of fresh-water lacustrine or brackish water, and sea shells, often of a gigantic size, as amongst the cretaceous and greensand formations, which often rest upon the lias, oolite, dolomite, and new red-sandstone (called also trias or jurassic).

"Now it is with this series that we are most likely to find coal at first in Southern India, as these deposits occur in very extensive beds, and are often accompanied by the remains of gigantic animals. The tertiary and sedimentary deposits often contain coal, but usually of an imperfect kind, as lignite and thin beds of bituminous shale. The geological indications of this class are chiefly soft sandstones, gravel, rolled pieces of quartz, and concretionary lime with fossil trees occasionally converted into stone in the centre, and encrusted with a thin layer of black lignite which burns feebly. The mineralogical and metalliferous indications of coal are usually gneiss-pegmatite, or some stratified form of recent granite in fine crystals resting upon mica schists, slates, and quartzite, or upon the older granites in large crystals. These form the bed upon which coal deposits rest, and it is supposed that they mark the lower limits of the transition formations which correspond with the period of the Noachian Deluge. Above these strata occur enormous deposits of sandstone, mica slates, shales, fire clays, and strata containing salt, sulphurets of the metals, lead, antimony, copper, manganese, and iron, sulphates of lime, barytes, &c., showing almost incontrovertibly that salt-water coming into contact with melted rocks and metals, was one of the great chemical agents which assisted in the production of coal deposits.

"The miner's or coal-viewer's indications are entirely different from the above. He is guided in his search partly by the general features and scenery of the country, with a few indications of a practically useful nature. These are the result of a long series of investigations that are now reduced by practice into a working system which has probably been of more practical value than the geological researches. The miner starts by saying that the best deposits of coal are usually in flat, level, rich alluvial countries, often with miles of black loamy carbonaceous soil on the surface, low undulating hills usually of sandstone alternating with ironstones, nodular lime, and thick beds of clay, these usually rest upon grits, compact, slaty limestones, and band iron. If the slaty limestones are magnesian there will probably be no fossils, as this substance is very destructive both to animal and vegetable life. If hard iron and flinty slates and shales alternate, the coal will probably be of fine quality, and in frequently repeated strata. If whetstones and magnesian limestones occur above the coal, it will also be of good quality, but it may occur at great depths, as in Lancashire and about Newcastle, where shafts have been sunk to 1,800 feet, but the coal at this depth is always of very fine quality. There are a few other indications which the miner considers to be almost invariably good, as the occurrence of galena or sulphuret of lead, sulphurets of iron and copper, thin deposits of manganese and beds of granular, white, black or grey limestone, cropping out upon fine-grained sandstone, or gneiss, on the sides of low undulating hills backed by precipitous bluff, basaltic, or trap dykes with tuffaceous lime. Petrifying springs with travertine and encrusting concretionary lime almost invariably occur within a few miles of coal fields, but not above coal. They usually mark the vicinity of transition lime and carboniferous strata, the carbonic acid from which makes the lime more soluble. There are seventeen or more instances of this in Great Britain and Ireland.

"In my next I will give you the result of our practical applications of these indications of coal to the Madras Presidency. Some of them are very encouraging."—*Madras Mail*.

#### COAL AND THE GEOLOGICAL DEPARTMENT.

We have been requested by Dr. Hunter, the Superintendent of the local School of Arts, to give insertion to the following letter:—

"As the best answer to the letter of Mr. Bruce Foote which appeared in your issue of the 8th instant, trying to throw ridicule upon Captain Newbold, Colonel Applegath, myself, and others who have been searching quietly for coal, will be a statement of a few important facts which have lately come to light, I shall be glad if you can find room for the insertion of the accompanying letter in your issue of this evening, and also of the accompanying copy of a letter to the Secretary of the Board of Revenue on a similar subject.

"I differ entirely with some of the members of the Geological Survey who have been lately exploring in the Madras Presidency in two or three points, and I think it of great importance that the public should hear both sides of the question. In the first place, Mr. King, Mr. Bruce Foote, and the late Mr. Oldham, seem perfectly to ignore the importance of all mineralogical and metallic indications of coal, and in my opinion they



Feb. 15, 1871.

attach far too much importance to mere geological and fossiliferous indications. I do not deny the importance of these, if we had at our command the means for thoroughly searching the different strata by borings or deep excavations, but as yet I have not heard of a single boring having been made by the department in the Madras Presidency. In the second place the metallic and mineral indications which have for some time past been sent to the School of Arts have also been accompanied by sandstones, iron ores, black, grey, and carboniferous limestones, shales, and slates, all of which, with a few other indications of both marine and fluviatile deposits, and the frequent occurrence of petrifying and chalybeate springs, point to the probability of the occurrence of coal. I have found by practical experience that the samples of minerals, metals, fossils, and other strata, which accompany coal when distributed through districts where similar substances occur, speak far more quickly both to the European and Native officials and subordinates of a district, than more written or illustrated descriptions; so I have adopted this as a simple and practical method of getting at the mineralogy, the metals, and the geology of Southern India. I have to return most sincere thanks to a number of friends, both in this country, and to scientific and old Indian friends at home, who are quietly and unostentatiously helping us to try to find coal. I will give you full particulars of what has been going on in this way for some years past, as it is but fair to friends and the public, that this information should be made known.

"If Mr. Bruce Foote and Mr. King think that the subject is one of such trifling importance as to be put a stop to by ridicule and pointed personalities, I decline entering into any controversy with them on subjects of this kind. I have visited most of the coal-fields of England, Scotland and India, and have collected the strata minerals, metals, and fossils which occur in these coal-fields, and have distributed specimens widely in Southern India in the belief that this is a practical way of searching for coal. The public can judge for themselves whether it is so or not. Coal and coaly deposits are turning up in places where they were not expected."

#### To the Secretary Board of Revenue.

SIR,—I have the honor to request you will do me the favor to forward the accompanying minerals to Mr. Charles Minchin, Agent to H. H. The Maharajah of Vizianagrum.

2. I have received on several occasions from the vicinity of Vizianagrum and Vizagapatam some important minerals useful in artistic and industrial manufactures, as well as three or four others also of an important kind, which lead me to expect that there will be found large deposits of useful metals and perhaps deposits of coal. As the latter would be of immense value to the coasting trade of this Presidency, I will point out where the search for coal ought to commence.

3. I have received from the Vizagapatam district, and I believe from the vicinity of the Pungherry waterfall, specimens of incrusting concretionary lime, evidently from a petrifying spring, and from the same vicinity sandstones, iron ores, and clay iron stone conglomerates. Now, as these are minerals which almost invariably accompany coal in other parts of the world, I think it not at all improbable that coal may be found between Vizagapatam and Vizianagrum, as there are evidences in this vicinity of the upheaving of the old granite hills, and of the formation of sandstone and iron deposits resembling those on the borders of coal fields. The occurrence of iron, manganese, copper, lead, and antimony in very large quantities, along with soft sandstones, plumbago, or carburet of iron, and plumpudding stone conglomerates, all point to this locality as one where the transition rocks have burst through the old coarse granites and the finer grained gneiss or more recent granites, and I believe that if proper search were made in this vicinity it might lead to the discovery of coal.

4. It is now acknowledged by Sir R. Murchison, Sir W. Mitchell, and other mineralogists, that wherever these combinations of metallic deposits occur, along with sandstones, micaceous, decayed granites or trap rocks, there search ought to be commenced for coal, as these are the mineralogical and metallic proofs of the existence of the commencement of transition or secondary formations in the vicinity of which the best kinds of true coal occur.

5. Coal deposits occur at no very great distance from Vizagapatam on the Godavary, and I have lately received good evidence of the occurrence of coal from several other localities on the Coast. A box of coal with the accompanying fossils and mineral deposits is daily expected from Cuttack. Sandstones, shales, and clay ironstone deposits with bandiron ore have been received from Rumbah and Gopalpore, at the southern extremity of the Chilka Lake. Some very interesting fossils of theoolite and lina deposits have been found at Rajahmundry both by Ool. Applegath and Major Mullins, and as coal of different qualities accompanies deposits of these periods (now called jurassic) there is no reason why extensive beds of coal may not be found in this and several localities in Madras where jurassic fossils occur.

8. May I request that a copy of this letter be sent to Mr. Charles Minchin, with the accompanying metals, minerals, and limestones.

Your most obedt. servant,

ALEX. HUNTER.

10th February 1871.

## PUBLIC WORKS—RAILWAY.

### THE GAUGE OF THE FUTURE.

At the meeting of the British Association in Liverpool, Mr. R. F. Fairlie, C.E., read an able paper on "The Gauge of the Railways of the Future," much of which had special reference to India. Having shown that in England the competition between the companies leads them often to despatch goods, whether the loads be paying loads or not, and that whatever explanation may be made of the small proportion of paying to non-paying loads, the fact must in any case tell in favour of the narrow gauge, Mr. Fairlie shows that a 3 feet gauge line can carry, without an additional shilling for haulage,  $2\frac{1}{2}$  times as many tons as are now carried over the 4 feet 8 $\frac{1}{2}$  inch gauge. He then goes on—

In India the competition between companies does not exist, and it is possible to detain goods at stations until a maximum quantity is obtained for transport. Time is there of little importance, and hence it has been urged that under such circumstances, large gauge and large waggons are the best, in order that it may be practicable to run a small number of heavy trains per day. It is impossible to conceive an argument more fallacious than this; and its employment has saddled India with the commencement of a system of railways extravagantly beyond the requirements of the country for the next hundred years, or even longer. Whence, then, arises the necessity for constructing the Indian railways on a 5 feet 6 inch gauge?

Taking the case of the East India Railway as being the North-Western of India, let us see how the absence of competition and the 5 feet 6 inch gauge affect the question of transport. The number of net tons hauled over the line for the year ending 1869 was 938,629, in 32,490 trains—amounting to about 29 tons per train. The average number of waggons composing a train is taken at 25, of 6 tons each; which gives 150 tons of freight, or a proportion of over 5 tons of freight to 1 ton of paying load, it will be seen that, notwithstanding the absence of competition, and with everything to favour the working of the line, the actual dead weight is over 5 tons to 1 ton. If, on the other hand, the gauge had been 3 feet instead of 5 feet 6 inches, the dead weight, under the same management, would have been reduced from 5 to 1, to  $1\frac{1}{2}$  to 1. Let us imagine the saving that this change would effect in fuel alone; considering that less than one-fourth of the tonnage hauled would afford precisely the same accommodation to the traffic that now exists, and would produce the same paying result. It surely does not require a philosopher to see that the narrow gauge is infinitely superior in every respect even to the 4 feet 8 $\frac{1}{2}$  inch gauge, and it ought to be engrained on the mind of every engineer that every inch added to the width of a gauge beyond what is absolutely necessary for the traffic adds to the cost of construction, increases the proportion of dead weight, increases the cost of working, and in consequence increases the tariffs to the public, and by so much reduces the useful effect of the railway.

The present railways in India, although doubtless valuable for military purposes have cost about £20,000 per mile [nearer £25,000, En. I. E.]. The average rate per ton paid on the East Indian Railway is 2 $\frac{1}{2}$ d. per ton per mile. How different would the results have been, even now, if the lines had cost £5,000 instead of £20,000 per mile, and if the tariff of rates had been 4d. per ton per mile instead of 2 $\frac{1}{2}$ d.!

In January last, my presence was hurriedly required in St. Petersburg by the Russian Minister of Public Works, with reference to the subject of the Fairlie system of railways. His Excellency the Minister required me to give a short distinct account of the advantages claimed for my system. I replied that by the adoption of that system, railways could be made at a cost of little over one-half the sum required to construct them on the ordinary plan, so that it would be possible to give nearly two miles for the sum now expended upon one; that these lines, when finished and equipped would possess a carrying capacity equal to, if not greater than, that of those on the old system. In other words, they should be capable of carrying as many passengers and tons of goods in twenty-four hours as the best lines now existing; and that this should be done at a reduced cost, independently of the reduced wear and tear of the permanent way, and of the value of the increased line of rails. His Excellency observed, that if only a portion of this could be accomplished, it would be a great thing for Russia, and that the matter should be at once inquired into. Not many days elapsed before an Imperial Commission, composed of a number of the most scientific men in Russia, and presided over by His Ex-

receiving the Count Alexis Bobrinsky, private attaché to his Imperial Majesty the Emperor, was instructed to come to this country and to investigate the correctness of what I had asserted. Early in February the Commission arrived in London, and after a thorough examination of the question in all its theoretical bearings, it was resolved to put it to some practical tests. The Council of India, the Board of Trade, Norway, France, and other countries sent their representative men to be present on the occasion, as it was felt that what was good for Russia would be equally good for the countries I have mentioned.

The Commission returned to Russia, and sent in its report to the effect that I had fully proved the correctness of all my assertions. This was in March; and in April a railway of fifty versts, on the new system, was ordered by His Majesty the Emperor to be constructed, and to be opened in November next. The locomotives for this railway may be seen any day during the next month at the establishment of Messrs. Sharp, Stewart, & Co., Manchester. The new system has also been adopted for working some of the old lines, and the stock for the Tamboff Saratoff Railway, the Great Russian, and others, may be seen under construction at the same establishment.

The members of the Council of India were so struck with the many advantages of the system that they forwarded copies of the reports of the experiments above described to the several Indian railway companies both at home and in India. They also forwarded copies to the Governor-General and the Public Works Departments in India; many of the companies invited their engineer to examine and report on the question raised, and with one or two honourable exceptions,\* these reports are unanimous in the r opposition to any improvement, or to any interference with the system under which the writers have lived, and moved, and had their being; but in only one of them is there any argument that requires a moment's notice.

## PUBLIC WORKS—IRRIGATION.

### CENTRAL PROVINCES.—LAKES AND TANKS.

NEXT to the boundless forests and the bold mountain scenery, there is perhaps nothing which strikes the traveller in the Central Provinces so much as their large and numerous tanks. In one part they are so numerous, that the country has been aptly been called the Lake Region. These sheets of water are of three kinds. There are first the natural lakes like that at Sangur, and the Booragurh Tal on the road between Jubbulpore and Goshulpore. Then there are the tanks in the flat country. These are not generally the well-formed excavations which are to be met chiefly in Hindoostan, although there are many of those square well-sloped tanks even in the Central Provinces. But more commonly the tanks in the low lands of the Central Provinces are formed by raising a long low dam across a declining plain. Their centres are excavated into which a stream is turned if there is one in the neighbourhood, and the reservoir is also fed by the fall of rain on its own slope. A large sheet of water is formed by the close of the rains, not of considerable depth, but rather over the greater portion of the surface, somewhat shallow; still it is of service in the irrigation of rice fields. After the rice crop is cut, the water which may be left in the reservoir, is let out by a sluice cut in the dam, and a crop of wheat is raised in the bed. The Rewah country to the north of Jubbulpore, abounds in these tanks, so does the district of Bhundara. We hardly know of any better method of raising dry crops in these provinces or elsewhere. It puts the agriculturist almost in a position of independence, for his wheat is a clear profit to him. It may be said to have its great disadvantage also in a year in which the rain-fall may be short; for then both the rice and wheat crops suffer. But it is necessary to note here that droughts are not of frequent occurrence in these provinces; indeed there have been more famines from excessive or untimely rain and hail than from drought; and time has given its approval to the system of tank cultivation.

We come now to the other large artificial tanks and lakes in the provinces, formed by throwing a dam across a valley so as to form a basin for the drainage from the hills. Here, wrote Sir Richard Temple, is not a piece of water with regular banks, crowned with rows or avenues of trees, with an artificial dyke and sluices, and with fields around it, but it is an irregular expanse of water; its banks are formed by rugged hills covered with low forests that fringe the water, where wild beasts

\* It is most gratifying to find that one at least, if not more, of the home engineers for the Indian railways, after a patient and careful investigation of the new system, has decided in favour of it. It appears after the second series of experiments with the "Little Wonder," the "Steamroller," and the "Proctor" were made, a committee, composed of Colonel Stracey, R.E., Colonel Dickens, R.E., Mr. John Fowler, C.E., and Mr. A. M. Randall, engineer of the East Indian Railway, was appointed to consider the question of the applicability of a new narrow gauge for India, and I understand that Mr. Randall has joined Colonel Stracey and Colonel Dickens in recommending a feet 9 inches as the most business gauge, while Mr. Fowler alone goes in for the 3 feet 6 inch gauge. This splits the committee with me about give to India the 3 feet gauge. I have long held this gauge to be the best for that country or any other with a similar climate, because this gauge gives ample accommodation and security to passengers, in the event of a large fire, and, for second-class and first-class, on a well, simple gauge for the conveyance of all war, munitions, and likewise all bulky commodities such as cotton, with a maximum speed of fifty miles an hour.

repair to drink; its dykes, mainly shaped out of spurs from the hills, are thrown abwart the hollows, a part only being formed by masonry; its sluices often consist of chams or fissures in the rocks; its broad surface is often, as the monsoon approaches, lashed into surging waves. A description from even so able a pen fails to convey the impression which is formed on seeing one of these basins. The great ages of most of them add interest to them. Some were constructed upwards of five hundred years ago. Many have fallen completely out of repair. The masonry debris of others in the wild fastnesses of the hill regions, tell their own tale of energy and agricultural prosperity hundreds of years ago where now there is nothing but forests and wild beasts. But, whether in repair or in ruins, they all signify that lakes and tanks have played no small part in the administration of the country during the earlier dynasties. The effect of this can be seen to this day in whole districts which, compared to the North-West, for instance, may be said to be devoid of wells. Even for drinking purposes, the people in many parts depend on tanks, into the waters of which cattle are allowed to go and wallow. Many of these lakes and tanks have their fairy legends associated with them.

But it is not in the interior alone that these monuments of the past are to be found. If not so large, or useful as the reservoirs in the valleys and plains, the Juma, Aurbajhirn, and Pelingkheri tanks at Nagpore, that at Seoni and the Hunnooman Tal at Jubbulpore, are still extraordinary works of which even a scientific age and a highly civilized government may be proud. It is impossible to take an account of what has been done in the way of providing water-supply by native dynasties in the country now known as the Central Provinces, without being convinced that one great duty of the government of the day is to reclaim the really useful works of the past, before attempting to project new ones. If we can by cleaning out old tanks, removing their silt and repairing their banks, contribute towards a sufficient supply of good water, we shall confer a real blessing on the people; we shall secure their gratitude; and prove to them that, fully appreciating one good feature of native government, we wish to vie with past dynasties by giving to the people the two absolute necessities of life—pure air and water; and that rather than attempt to stamp out the virtues of the past by introducing new projects, we wish to revive bygone memorials, by rescuing from further decay all the important works from which their ancestors derived benefit. It is not to be doubted, that if the people found us heart and soul in this object, they would aid the British even more cordially than they do now, in the work of improved government.—*Jubbulpore Chronicle*.

## DEVELOPMENT OF COMMERCIAL RELATIONS BETWEEN RUSSIA AND INDIA THROUGH THE SUEZ CANAL.

(Continued from our last.)

THE prices of coffee were as follows in 1869:—

### AT ST. PETERSBURG—

Best.....	R. 18-75 to R. 17 per pood,	113s. 8d. to 140s. 9d. per cwt.
Middling ..	" 12-75 to " 13-75 "	105s. 5d. to 119s. 8d. "
Ordinary....	" 11-50 to " 12-75 "	90s. 2d. to 105s. 5d. "

### AT MOSCOW—

Round.....	R. 14 to R. 15-15 per pood,	115s. 10d. to 120s. per cwt.
Inferior....	" 12-50 to " 13-70 "	93s. 5d. to 113s. 7d. "

### AT ODESSA—

Ceylon.....	R. 10-75 to R. 11 per pood	89s. to 91s. per cwt.
Inferior ..	" 8 to " 9 "	66s. 2d. to 74s. 6d. "

Ceylon coffee, of which the excellent quality is well known in Russia, will probably come into Russia in large quantities by the Suez route.

5. *Sago*.—Sago is but little used in Russia. Its average price in Russia is R. 8-30 per pood (68s. 8d. per cwt.) The import duty is R. 1 per pood (9s. 8d. per cwt. at par.)

6. *Spices*.—The most important of these in the Russian trade are pepper, cloves, cinnamon, cardamoms, nutmegs, mace, ginger, &c. (Vide Table A. for quantities imported.) The prices were as follows in 1869:—

### AT ST. PETERSBURG—

Pepper, black..	R. 7 to R. 7-80 per pood,	58s. to 63s. per cwt.
Cardamoms.....	120 to 130 "	£49-13 to £53-15 "
Cloves.....	" 7 "	56s. "
Clove heads.....	6 to 7 "	49s. 8d. to 56s. "
Nutmegs.....	36 "	£11-11-8s. "
Mace .....	26 "	182s. "

### AT ODESSA—

Pepper.....	R. 7-80 to R. 7-90 per pood,	58s. 8d. to 60s. 6d. per cwt.
Clove heads.....	8 "	41s. 5d. "
Cinnamon.....	22 "	182s. "

The duties charged on this importation into Russia are as follows:—

Cardamoms, mace, nutmegs, and cinnamon ... R. 250 per pood 24s. 7d. per cwt. ||  
Cloves, pepper, ginger, &c. ... „ 1-50 „ 14s. 8d. „

7. *Silk*.—Russia imports only the higher qualities of raw and spun silk. She draws the bulk of her supplies of raw silk from the Caucasus and from Central Asia. Its importation from China and Japan is not expected to increase much. Mr. Skalkoffsky considers that about 6,000 poods (1,930 cwt.) may be annually brought to Russia by Suez Canal at a cost of £20 per ton. The prices of Chinese silk were as follows at Moscow:—

Floss ... R. 290 to R. 360 per pood £130 to £140 per cwt.  
Organzine ... 450 to ... 570 „ „ £186 to £236 „

The import duties in Russia on silk are as follows:—

Silk, raw and waste ... 50c per pood 4s. 11d. per cwt. ¶  
„ twist, train, organzine R. 5 „ „ 49s. 1d. „ „  
„ yarn of silk waste „ „ 4-50 „ „ 44s. 1d. „ „

8. *Tin*.—The quantity of tin imported into Russia is small. England supplies almost half the quantity. The prices of tin in 1869 were as follows:—

At St. Petersburg—

Tin in blocks. R. 18 to R. 19 per pood, £7-9-0 to £8-17-0 per cwt.  
„ bars (rods). 16 to 17-50 „ 6-12-5 to 7-4-10 „ „ „

At Odessa—

Tin in bars...R. 20 to R. 21 per pood, £8-5-6 to £8-13-9 per cwt.

The price of tin is rising in Russia. The duty charged on importation is 20 copecks per pood, or 1s. 11d. per cwt., at the par rate of exchange.

9. The prices of gum and drugs in Russia in 1869 were as follows:—

At St. Petersburg—

Common incense storax	R. 8 to	R. 14 per pood, 66s. 2d. to £1-15s. 10d.
Gum benzoine	R. 40 to 90	„ £16-11-0 to £37-4-9 „
„ Ammoniac	„ 8	„ 66s. 2d. „
„ Arabic	„ 9 to 13	„ 74s. 5d. to 107s. 6d. „
Gamboge	„ 65 to 78	„ £22-15-3 to £2-5s. 0 „
Copal	„ 9 to 10	„ 74s. 5d. to 82s. 9d. „
Shallac	„ 12 to 15-50	„ 80s. 3d. to 128s. 4d. „
Catechu	„ 5-50	„ 45s. 7d. „
Kino	„ 8	„ 24s. 9d. „
Gallnuts	„ 13-50 to 15	„ 111s. 8d. to 124s. 2d. „
Camphor	„ 20-50 to 23-50	„ 169s. 8d. to 194s. 5d. „
Turmeric	„ 4	„ 83s. 1d. „

The import duties to which the above goods are liable are as follows:—

Gums, resins	80c.	per pood, 2s. 11d. per cwt. ¶
Storax	R. 1	„ 9s. 9d. „
Gum, benzoine	„ 4	„ 39s. 2d. „
Gamboge	„ 1-10	„ 10s. 9d. „
Gallnuts	„ 5	„ 6d. „
Camphor	„ 30	„ 2s. 11d. „
Turmeric	„ 5	„ 6d. „
Shallac	„ 30	„ 2s. 11d. „
Catechu, Kino &c	„ 30	„ 2s. 11d. „

10. *Tea*.—Mr. Skalkoffsky advises the merchants of Russia to send their tea to Odessa direct from Shanghai by way of the Suez Canal. By the overland route through Mongolia, the tea of China takes 14 months, to reach the fair of Nijm Novgorod, whereas by the Suez route it could come in 60 to 65 days from China. The sea-borne tea which at present enters Russia is principally shipped from London. Mr. Skalkoffsky does not think that much East Indian tea will enter Russia, where it is almost unknown.

The cost of carriage from Foochoo to Suez is about 95c. per pood (7s. 10d. per cwt.) and that from Suez to Odessa 30 copecks per pood (2s. 6d. per cwt.)

The expense of carrying tea from Odessa to Moscow, inclusive of all charges for commissions, &c., is about R. 1-30 per pood (10s. 9d. per cwt.) Consequently, the cost of the tea shipped to Odessa from Shanghai is increased by R. 2-53 per pood (21s. per cwt.) On the other hand, the cost of carrying it to Moscow by way of Kielkhta is R. 8-80 to R. 12 per pood (£3-12-9 to £5 per cwt.), or 22 copecks to 30 copecks per Russian lb. (8½ to 10½d. per lb. avoird.) more than by Suez, independently of the great loss of time by the former route.

By way of the Cape, the present cost of carrying tea is as follows:—

Freight Shanghai to London	28 to 28 per ton.
„ London to St. Petersburg	30s. „
„ St. Petersburg to Moscow	50c. per pood, 63s. 4d. per ten.*
Total cost	R. 3-40 „ £19-16-6 „

\* Now 24 per cent. less.

† At par, now 24 per cent. lower.

‡ These duties are calculated at the par exchange. They are now 24 per cent. lower.

§ This total does not agree in sterling with the previous item. Mr. Skalkoffsky has probably taken the par exchange in converting sterling into Russian money.

The prices of tea were as follows in 1869:—

At St. Petersburg—

Black Oongou, 75c. to 100c. per lb. 2s. 2d. to 2s. 11d. per lb. avoird.  
„ Bouchong, 85c. to 100c. „ 2s. 10d. to 2s. 11d. „  
Flowerly Pekoe, 150c. to 200c. „ 4s. 5d. to 5s. 11d. „

At Moscow—

Canton (sea-borne) tea, 85c. to R. 1 per lb., 2s. 6d. to 2s. 11d. per lb.

At Odessa—

Tea, 1st sort... 160c. to 200c. per lb. 4s. 8d. to 5s. 11d. per lb.  
„ 2nd „ 120c. „ 2s. 6d. „  
„ 3rd „ 100c. „ 2s. 11d. „

The duty on tea, imported on the overland and maritime frontiers of Russia in Europe, is as follows:—

Flowerly, green and yellow, R. 22 per pood, or £10-16-6 per cwt.  
Ordinary black & brick tea, R. 15-40 „ or £7-11-8 „

*Exports*.—After passing in review the various articles of commerce that may be brought to Russia by the Suez Canal route, Mr. Skalkoffsky shows that Russia has but few goods to export to the far East wherewith to pay even for the indigo or coffee which she will import. Among the goods that might, perhaps, be to some extent exported, the following are mentioned:—

1. *Flour and biscuits*.—These find a market even now in Egypt and in the Red Sea. Flour might be exported to the East Indies, as well as macaroni and vermicelli.

2. *Coals*.—The coal of the Dion basin, when reduced in price, which is at present 14 copecks per pood (1s. 3d. per cwt. at Odessa), might be carried even to Bombay, and sold there at the rate of 55 copecks per pood (4s. 7d. per cwt.)

3. *Meat, tallow, salt beef, butter*.—All these, Mr. Skalkoffsky thinks, might be exported with profit to Egypt, and even to the East Indies.

4. *Cattle and horses*.—There is a great demand for Russian cattle at Alexandria.

5. *Candles and soap*.—Mr. Skalkoffsky thinks that Russian soap and candles might compete in Egypt with similar French and Australian goods.

6. *Ica*.—Large quantities might be shipped to Egypt, the Red Sea, and the East Indies from the Sea of Azoff.

7. *Cordage*.—Russian cordage reaches the East Indies by way of Hamburg and England. If depots were established at Aden and Bombay, a large trade might be done.

8. *Timber*.—Much required in Egypt, Arabia, and on the shores of the Persian Gulf. Might be exported in large quantities in sailing vessels from Kherson, Taganrog and the Eastern Coast of the Black Sea.

9. *Kerosine* made in the south of Russia, might be exported to Egypt, where large quantities of American kerosine are now consumed. It may become an important article of commerce in the East Indies.

10. *Salt* might be exported to Calcutta from the coast of the Black Sea.

11. *Spirits*.—There is a considerable demand for spirits in Egypt, and Russia can well compete with the spirits distilled in Austria and the United States.

12. *Boots and shoes, clothes, &c.*, might be sent to Egypt, and particularly for the army.

13. *Brocades and embroidered leather*, in great demand in Egypt, Arabia, and on the shores of the Red Sea.

14. *Tar, canvas, tow, &c.*, will be in a great demand for ships navigating the canal.

15. *Hardware, &c.*, copperware, cheap fire-arms, stirrups, bits, cast iron rods, knives, locks, brass coffee pots, dishes, &c., all cheaply made in Russia, would find a large market in the East.

16. *Textiles*.—Mr. Skalkoffsky thinks it possible to send good cotton prints, &c., up the Suez Canal. He quotes the *Times* to show that English cotton goods have acquired a bad reputation in the East, and urges his countrymen to study the Asiatic taste in those goods. He gives no facts or figures in support of his opinion that Russian cotton goods can be exported to India &c., with profit. ‡

In summing up this part of his report, Mr. Skalkoffsky says that it would not as yet be safe to reckon upon more than 500,000 poods (about 8,000 tons) weight of Russian goods (irrespective of coal) that might be exported in return for cotton, indigo, &c. He thinks that at the utmost the value of the Russian exports by the Suez Canal would not amount to more than 1½ or 2 millions of roubles (£188,000 or £250,000).

In conclusion, Mr. Skalkoffsky enquires into the position and prospects of the Russian Steam Navigation Company in the Black Sea. He thinks that the Company (being subsidised by the Government) should not be guided by commercial considerations alone, and that it should not, by running steamers, pro-

† At the par rate of exchange; now 24 per cent. lower.

‡ In 1869 the number of men spinning and weaving manufactures in the Russian Empire was 416 and 280 respectively, the number of hands employed in these factories being about 27,500.  
The value of the cotton goods manufactured in Russia was at the same period about 12 millions sterling.

into the trade of ports in which Russia could have no interest, such as Bussorah and Kurrachee. It should not look so much to the quantity of goods which it carries as to the duty of extending Russian trade in Egypt on the shores of the Red Sea and in the East Indies. The Company, he urges, should maintain six steamers (and one in reserve) on the line between Odessa and Bombay. These steamers should not carry Manchester goods, which penetrate into Central Asia and compete with Russian cotton carried there at great cost, nor should they visit Bussorah and Kurrachee, which compete with Russian wools, linseed, &c. Calcutta, Colombo, Penang, and Batavia are not as yet of sufficient importance to Russian trade and navigation to warrant any Government aid in the establishment of a line of Russian steamers.

Mr. Skalkofsky terminates his reports by recommending the adoption of the following measures in addition to the establishment of a line of steamers to Bombay:—

1. The reduction of port charges and transit dues.
2. The improvement of the navigation of the Sea of Azof, which is not, according to Mr. Skalkofsky, included in the

stipulations of the Treaty of Paris, and which should, therefore, he thinks, give shelter to Russian vessels-of-war.

3. The establishment of bonded warehouses at Kief and Kharkof.

4. Reforms in the excise laws, which would admit of Russian spirits being exported with greater advantage.

5. A re-arrangement of the rates of coinage, and the classification of goods on Russian railways.

6. The establishment of Russian branch banks at Bombay and Shanghai.

7. The laying of a sub-marine cable between Odessa and Constantinople.

8. The immediate appointment of a Russian consul at Bombay. "He should be a sensible and energetic representative of the merchant class, or a naval officer."

9. A careful study of the trade of the far East.

10. A reduction of Customs duties on goods brought direct from the far East in Russian ships.

St. Petersburg, 1st August 1870.

### THE PUBLIC REVENUE AND EXPENDITURE.

Revenue and Expenditure of the Government of India for the first eight months of the year 1870-71, as compared with the corresponding period of 1869-70.

Revenues and Receipts.	April to Nov 1869	April to Nov 1870	Increase.	Decrease	Expenditure.	April to Nov 1869	April to Nov 1870	Increase.	Decrease.
£	£	£	£	£	£	£	£	£	£
Land Revenue .....	10,112,222	10,268,808	451,520	.	Interest on Funded and Un-	1,795,589	1,850,740	55,142	...
Tributes, &c., from N. India					funded Debt .....				
States .....	410,760	466,411	55,645	.	Interest on Service Funds	372,878	335,820	37,058	37,058
Forest .....	245,227	220,123	25,104	24,804	and other Accounts .....	261,754*	223,560*	38,194	41,194
Excise on Spirits and Drugs	1,432,839	1,540,185	107,346	.	Refunds and Drawbacks .....	1,495,228	1,490,993	5,235	4,285
Assessed Taxes .....	534,809	1,208,188	673,379	.	Land Revenue .....	182,110	251,593	69,483	...
Customs .....	1,479,478	1,655,726	176,248	.	Forest .....	145,483	216,868	71,385	...
Salt .....	3,591,685	3,928,828	337,143	.	Excise on Spirits and Drugs	21,111	28,769	7,658	...
Opium .....	5,212,730	5,209,879	2,851	2,850	Assessed Taxes .....	120,594	122,148	1,554	...
Stamps .....	1,507,303	598,961	908,342	908,342	Customs .....	252,116	244,144	7,972	8,272
Mint .....	112,518	26,140	86,378	86,369	Opium .....	1,468,326	1,667,048	200,722	...
Post Office .....	453,516	555,433	101,917	.	Stamps .....	68,044	38,694	29,350	29,350
Telegraph .....	117,206	169,881	52,675	.	Mint .....	57,665	39,931	17,734	17,734
Law and Justice .....	613,807	1,550,019	936,212	.	Post Office .....	412,566	416,402	3,836	...
Police .....	168,576	170,907	2,331	.	Telegraph .....	268,547	201,481	67,066	65,116
Marine .....	108,157	155,518	47,361	.	Administration .....	752,711	751,124	1,587	1,587
Education .....	52,169	40,207	11,962	11,962	Minor Departments .....	140,045	128,682	11,363	11,363
Interest .....	238,884	208,753	30,131	25,131	Law and Justice .....	1,919,910	1,935,243	15,333	85,303
Miscellaneous .....	587,747	404,945	182,802	132,802	Police .....	1,583,648	1,482,707	100,941	100,941
					Marine .....	281,722	250,651	31,071	34,068
					Education .....	411,211	386,259	24,952	27,952
					Ecclesiastical .....	105,571	100,459	5,112	5,112
					Medical Services .....	293,860	315,024	21,164	22,064
					Stationery and Printing	161,134	147,267	13,867	16,867
					Political Agencies .....	261,995	169,456	92,539	92,539
					Allowances, &c., under				
					Treaties & Engagements	813,846	846,971	33,125	...
					Miscellaneous .....	453,801	535,136	81,335	...
					Superannuation, &c., Al-	459,956	468,188	8,232	...
					lowances .....				
Total .....	26,625,754	28,879,171	2,253,417	1,193,270	Total .....	14,502,798	14,066,211	436,587	408,868
Army Miscellaneous .....	439,441	400,120	39,321	30,312	Army .....	6,239,570	5,902,002	337,568	337,568
Public Works					Public Works	3,845,544	1,985,406	1,860,138	1,860,138
Ordinary.					Railways	36,453	49,719	13,266	...
Miscellaneous Receipts...	99,986	78,564	21,422	21,372	Guaranteed	108,115	84,105	24,010	18,920
Railway Ex-					Railway Ex-				
change, Gain.	274,457	92,785	181,672	1,61,672	change, Loss.				
State Rail-					State Rail-				
ways Traffic					ways .....		4,212	4,212	...
Receipts .....	5	2,929	2,924	...	Do. Extraordinary—Irri-	462,729	871,656	408,927	91,078
Do. Extraordinary do.					gation, &c. ....	10,898	126,234	115,336	...
Capital Account .....		2,943	2,948	...	State Railways .....				
Total Revenues .....	27,489,593	28,965,421	1,475,828	1,425,626	Total Expenditure .....	24,801,932	23,189,035	1,612,897	2,296,067

(a) Includes Irrigation receipts in the Public Works Department up to October only.

(b) Includes Income Tax realized in the Military Department up to September and in the Public Works Department up to October only.

\* Includes Refunds in the Military Department up to September and in the Public Works Department up to October only.

STATEMENT showing the Amount of each kind of CURRENCY NOTES of the BOMBAY CIRCLE in circulation on the 31st day of January 1871.

Date	Denomination of Notes						Total Value.
	10 Rs. Value	20 Rs. Value	50 Rs. Value.	100 Rs. Value.	500 Rs. Value.	1,000 Rs. Value.	
1870.							
15th December...	27,52,760	15,02,500	20,79,100	55,77,700	22,46,500	2,69,59,000	4,11,47,560
31st December...	27,12,550	14,75,060	20,22,000	54,09,300	22,61,000	2,71,76,000	4,10,55,910
1871.							
22nd January...	26,27,590	14,30,240	19,76,650	50,27,800	19,44,000	2,67,19,000	3,97,25,280
31st January.	26,16,440	14,33,420	20,05,600	51,92,500	19,16,500	2,67,19,000	4,38,83,460

STATEMENT of the amount of INDIAN GOVERNMENT CURRENCY NOTES IN CIRCULATION of the amount of COIN and BULLION RESERVE, and of the GOVERNMENT SECURITIES held by the Department of Issue of Indian Paper Currency.

Date	Circles of Issue.	Balance of Issue Account	Retired by other Offices of Issue	Currency Notes in circulation	Silver Coin Reserve	Silver Bullion Reserve	Gold Bullion Reserve	Reserve in Government Securities	Total Reserve
		Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs.
31st Dec, 1870...	Calcutta	3,62,55,580	1,08,440	3,61,47,140	1,21,52,456	35,08,488	3,12,495	1,42,42,231	3,02,15,670
	Ditto Madras	97,36,000	5,09,080	92,27,010	55,01,576	..	..	17,28,404	72,29,980
	Ditto Bombay	4,10,55,910	1,07,000	4,09,48,010	2,41,69,438	11,15,371	..	1,31,49,861	3,84,34,670
	Ditto Allahabad	80,09,060	35,50,170	44,58,590	68,32,609	..	..	11,03,291	79,35,900
	Ditto Lahore	47,19,010	21,77,500	22,41,510	39,40,263	..	..	7,00,037	46,40,800
	Ditto Calcutt	16,45,550	7,46,840	8,98,710	13,54,551	..	..	1,00,059	14,54,610
	Ditto Trichinopoly	19,21,640	16,18,900	3,02,740	16,01,921	..	..	1,00,059	17,04,980
	Ditto Vizagapatam	5,36,980	1,61,220	3,75,760	3,28,651	..	..	1,00,059	4,28,710
	Ditto Nagpore	46,84,140	1,68,270	45,15,870	40,83,218	..	..	5,47,902	46,31,120
	Ditto Kurrachee	47,39,100	23,96,490	23,42,610	42,09,074	..	..	5,00,106	47,09,180
	Ditto Akola	21,35,260	73,360	20,61,900	21,31,640	..	..	..	21,34,640
	Total	11,54,38,320	1,19,18,470	10,35,19,850	6,63,11,487	46,23,859	3,12,495	22,72,000	10,35,19,850

SILVER received and coined in the MINTS OF CALCUTTA, MADRAS, and BOMBAY, 1869-70.

	CALCUTTA			MADRAS			BOMBAY.		
	Bullion or Coin received during the month valued in Rupees.		Coined and examined during the month valued in Rupees	Bullion or Coin received during the month valued in Rupees.		Coined and examined during the month valued in Rupees.	Bullion or Coin received during the month valued in Rupees.		Coined and examined during the month valued in Rupees
	Govt	Merchants.		Govt	Merchants.		Govt	Merchants.	
July .....	1,201	2,722	9,80,351	..	3,594	..	88	1,03,558	26,51,675
August .....	66,565	2,020	..	..	641	..	..	48,631	11,23,586
September .....	39,122	3,28,445	..	..	..	..	40,524	49,655	3,28,585
October .....	8,487	2,12,373	..	..	8,903	..	8,241	1,09,343	1,53,625
November .....	520	59,349	..	..	3,806	..	1,44,504	92,117	..
December .....	2,600	1,81,929	..	..	..	..	..	1,61,541	..

CASH BALANCES in the GOVERNMENT TREASURES in INDIA, 1869-70 contrasted with previous Years.

	June.	July.	August.	October.	November.	December.
	Rs	Rs	Rs	Rs	Rs.	Rs.
Government of India .....	1,18,96,105	1,52,43,515	1,36,15,865	1,47,55,373	1,83,59,723	1,90,30,320
Bengal .....	1,49,51,970	1,28,40,473	1,12,23,907	1,29,20,478	1,21,74,692	1,38,42,855
British Burmah .....	27,50,480	28,44,725	32,10,450	41,59,849	86,45,337	31,83,587
North-Western Provinces .....	2,41,88,186	2,39,69,428	2,11,95,002	1,52,06,179	1,96,74,077	2,34,78,368
Oudh .....	63,08,804	62,19,612	53,75,040	98,55,325	47,42,376	58,85,090
Punjab .....	1,14,40,931	1,17,81,232	1,08,05,965	88,81,333	92,46,574	1,12,25,599
Bombay .....	3,59,55,116	3,05,08,255	2,55,10,012	1,88,78,543	1,33,67,631	1,79,41,554
Central Provinces .....	68,20,440	63,53,106	61,53,053	56,81,696	58,82,447	61,09,789
Madras .....	3,04,71,972	3,07,86,345	2,75,09,862	2,48,79,467	2,46,50,415	2,66,76,118
Total .....	14,22,20,014	14,00,50,089	12,29,02,765	10,73,15,334	11,74,29,373	13,24,73,643
1867-68 .....	11,62,04,798	11,00,92,880	9,63,10,342	7,89,68,846	7,15,22,468	8,01,62,855
1868-69 .....	11,81,90,260	10,94,54,305	10,02,48,304	7,04,14,121	6,14,11,682	977,02,861



THE BANK OF MADRAS.

THE NEW BANK OF BOMBAY.

THE BANK OF BENGAL.

STATEMENT OF AFFAIRS.				STATEMENT OF AFFAIRS.				STATEMENT OF AFFAIRS.			
31st Jan. 1871.				28th Jan. 1871.				31st Jan. 1871.			
LIABILITIES.				LIABILITIES.				LIABILITIES.			
Proprietors' Capital, paid up	...	...	...	Proprietors' Capital, paid up	...	...	...	Proprietors' Capital, paid up	...	...	...
Reserve Fund	...	...	...	Subscriptions on account of new Capital	...	...	...	Reserve Fund	...	...	...
General Treasury Balance	...	...	...	General Treasury Balance	...	...	...	General Treasury Balance	...	...	...
Deposits at Head Office	...	...	...	Deposits at Head Office	...	...	...	Deposits at Head Office	...	...	...
Deposits at Branches	...	...	...	Deposits at Branches	...	...	...	Deposits at Branches	...	...	...
Bank Post Bills outstanding	...	...	...	Bank Post Bills outstanding	...	...	...	Bank Post Bills outstanding	...	...	...
Reserve	...	...	...	Reserve	...	...	...	Reserve	...	...	...
Undrawn Cash Credits	...	...	...	Undrawn Cash Credits	...	...	...	Undrawn Cash Credits	...	...	...
Total Rs. ...	...	...	...	Total Rs. ...	...	...	...	Total Rs. ...	...	...	...
Assets.				Assets.				Assets.			
Government Securities	...	...	...	Government Securities	...	...	...	Government Securities	...	...	...
Loans on Government Securities at Head Office	...	...	...	Loans on Gov. Sec. &c.	...	...	...	Loans on Gov. Sec. &c.	...	...	...
Accounts of Credit on do.	...	...	...	Credit Accounts do. on Gov. Sec.	...	...	...	Credit Accounts do. on Gov. Sec.	...	...	...
Dead Stock	...	...	...	Bills discounted and purchased at do.	...	...	...	Bills discounted and purchased at do.	...	...	...
Stamps	...	...	...	Dead Stock and Less written off	...	...	...	Dead Stock and Less written off	...	...	...
Balance with Agents and Correspondents	...	...	...	Stamps	...	...	...	Stamps	...	...	...
Overdrafts	...	...	...	Balance with Agents and Correspondents	...	...	...	Balance with Agents and Correspondents	...	...	...
Government Reserve Cash	...	...	...	Overdrafts	...	...	...	Overdrafts	...	...	...
Cash and Currency Notes at Head Office	...	...	...	Government Reserve Cash	...	...	...	Government Reserve Cash	...	...	...
Do do. at Branches	...	...	...	Cash and Currency Notes at Head Office	...	...	...	Do do. at Branches	...	...	...
Bullion at H. O. and Branches	...	...	...	Do do. at Branches	...	...	...	Bullion at H. O. and Branches	...	...	...
Total Rs. ...	...	...	...	Total Rs. ...	...	...	...	Total Rs. ...	...	...	...

Government Promissory Notes enforced for Payment of Interest in London, under deduction of Amount re-transferred to India, and Outstanding in the Books of the Bank of Bengal.

Particulars.	4 per cent. Loan.				4½ per cent.		5 per cent.		5 per cent. Debentures for				Total Amount.
	31 per cent. Loan of 1863-64	of 1863-64	of 1864-65	of 1865-66	Transfer of 1865-66	P W of 1864-65	of 1865-66	of 1866-67	2 years.	3 years.	5 years.	15 years.	
31st May 1870. ...	63,100	94,133	2,346	21,237	40,600	1,21,13,300	1,49,96,400	14,500	46,16,200	4,01,600	5,70,18,000	4,21,41,100	16,43,12,962
30th June 1870. ...	63,100	94,133	2,146	20,824	40,060	1,51,02,600	1,39,82,900	1,39,72,500	11,500	46,22,700	3,03,700	5,71,02,900	16,40,12,713
30th July 1870. ...	63,100	94,133	2,773	20,504	40,111	1,500	1,49,64,900	1,22,64,000	1,52,05,600	14,500	46,50,900	4,32,06,800	16,40,92,236
31st August 1870. ...	63,100	94,133	2,773	20,604	40,141	1,500	1,50,24,400	1,23,05,700	1,65,85,700	14,500	47,21,500	4,41,02,800	16,38,98,886
30th Sept. 1870. ...	63,100	94,133	2,347	20,544	40,200	1,51,31,600	1,49,64,900	1,22,64,000	1,52,05,600	14,500	47,21,500	4,41,02,800	17,16,01,896
31st Oct. 1870. ...	63,100	94,133	2,347	20,544	40,200	1,51,31,600	1,49,64,900	1,22,64,000	1,52,05,600	14,500	47,21,500	4,41,02,800	17,50,18,994
30th Nov. 1870. ...	63,100	94,133	2,347	20,544	40,200	1,51,31,600	1,49,64,900	1,22,64,000	1,52,05,600	14,500	47,21,500	4,41,02,800	17,73,74,288
31st Dec. 1870. ...	63,100	94,133	2,347	20,544	40,200	1,51,31,600	1,49,64,900	1,22,64,000	1,52,05,600	14,500	47,21,500	4,41,02,800	17,80,14,049

## THE INDIAN MONEY MARKET.

## CALCUTTA SHARE LIST.

STOCKS.	Paid up.	Last year's Divd.	Quotations.
<b>BANKS</b>			
Agra Bank, Limited, A.	£10	1½ p. c.	98 a 60
Ditto, new contributory A.	.....	.....	24-15
Ditto B. Shares	.....	.....	.....
Agra Savings Bank	100	5 p. c.	101 a 102
Bank of Bengal	1000	2½ p. c.	185½
Bank of Calcutta, Limited, A.	384	3 p. c.	22 a 25-8
Ditto	50	3 p. c.	32 a 35-8
Bank of Upper India	50	6 p. c.	62 a 63
Delhi and London Bank, Limited	250	1½ p. c.	148 a 150-8
Mussoorie Savings Bank	100	6 p. c.	139 a 140
National Bank of India	£12½	2½ p. c.	112 a
Oudh and United Services, Limited	100	nil.	in liquid
Punjab Bank, Limited	100	4 p. c.	60 a 81
Shank Bank, Limited	500	6 p. c.	575 a 580
Unconv. Ser. Bank (Agra)	100	4 p. c.	90 a 92-8
United Bank of India	100	5 p. c.	100
<b>COMMERCIAL COMPANIES.</b>			
Barraboom Coal Co., Limited	1000	nil.	400 a 410
Ditto	200	nil.	80 a 82
Bengal Coal Co., Limited	1000	5 p. c.	1445 a 1450
Beards Warehouse	440	20 p. sh.	530 a 535
Brundson's Press Co., Limited	300	4 p. c.	170 a 172
Burdson Stone Co., Limited	100	6 p. c.	8 a 7
Calcutta Docking Co., Limited	700	nil.	250 a 260
Ditto New & Shares	350	nil.	125 a 130
Delhi Railway Co.	£20	2½ p. c.	229 a 237
Eastern Bengal Indigo Co.	100	nil.	35 a 38
Eastern Bengal Railway	£20	2½ p. c.	238 a 237
Eastern Steam Tug Co., Limited	250	nil.	nominal.
East India Railway Co.	220	2½ p. c.	248
Equitable Coal Co., Limited	250	5 p. c.	217½
Goswami Cotton Mills Co.	300	5 p. c.	212
Gowdapore Co., Limited	1000	6 p. c.	1500 a 1510
Ditto & Shares	125	2 p. c.	102 a 108
Great Eastern Hotel Co.	250	2 p. c.	148 a 150
Hemrah Docking Co., Limited	500	nil.	150 a 175
India General S. N. Co.	1000	2 p. c.	335 a 340
Ditto ditto	500	2 p. c.	167½ a 170
Ditto ditto	380	2 p. c.	84 a 85
Landing and Shipping Co.	100	7 p. c.	47
Namoyt's Pot. Press Co.	500	2½ p. c.	600 a 700
Oriental Gas Co.	25	4½ p. c.	68 a 70
Ditto (Contributory)	21	4½ p. c.	194 a 14
Oudh and Rohilward Railway	£10	2½ p. c.	105 a 106
Port Canning Land Co.	1400	nil.	230 a 235
Punjab Railway Co.	£20	2½ p. c.	220 a 222
R. Scott Thomson & Co.	300	3 p. c.	62 a 55
Tirhoot Indigo Limited	200	nil.	.....
<b>TEA COMPANIES.</b>			
Assam Tea Company	200	8 p. c.	210 a
Bengal Tea Co., Limited	100	5 p. c.	40 a 42
Ditto (Contributory)	60	5 p. c.	45 a 48½
Bismuth Tea Co., Limited	200	nil.	130 a 132
Ditto (Contributory)	50	nil.	21 a 20½
Central Cachet Tea Co.	200	2 p. c.	56 a 58
Dahong Tea Co., Limited	85	nil.	70½
Dakra Doon Tea Co., Limited	100	nil.	8 a 10
Durrung Tea Co., Limited	100	nil.	28 a 27
Eastern Ocher Tea Co.	100	8 p. c.	88 a 94
East India Tea Co., Limited	100	nil.	26 a 28
Jalalpur Ocher Tea Co.	250	6 p. c.	260 a 270
Kuchulpore Tea Co., Limited	1000	nil.	nominal.
Ditto (Contributory)	375	nil.	nominal.
Kurung and Darjeeling Tea Co	250	2 p. c.	00 a 01
Ditto (Contributory)	200	2 p. c.	157 a 158½
Kutail Tea Co., Limited	.....	.....	.....
Lower Assam Tea Co., Limited	25	nil.	nominal.
Moracherra Tea Co., Limited	90	nil.	75 a 70½
Moran Tea Co., Limited	75	nil.	nominal.
Muddenburt Tea Co., Limited	250	nil.	nominal.
Muttuck Tea Co., Limited	125	nil.	pa.
New Golah Bhat Tea Co.	£10	.....	100 a 101
New Mutual Tea Co.	30	15 p. c.	72 a 75
Punkabare Tea Co., Limited	100	nil.	25 a 30
Sum Tea Co., Limited	100	nil.	85 a 45
Thakur Tea Co., Limited	200	nil.	88 a 40
Upper Assam Tea Co., Limited	£10	nil.	nominal.
Victoria Tea Co., Limited	250	nil.	nominal.

## EXCHANGE ON LONDON.

	CALCUTTA.
Bank Bills, at 6 months' sight	1 10 to 1s 10 18-10d.
Do. at 3 months' sight	.....
Do. on demand, ditto	1 10½
Credit Bills (1st Class) at 6 months' sight	1 10½
Documentary Bills at 6 months' sight	1 11 to 1s 11 8-18

## BANK RATE OF DISCOUNT.

Discount on Private Bills and Notes	per cent. 5 to 6
Ditto on Acceptance of Local Banks	5 to 6
Int. on Loans on Security of Govt. Paper	64

## GOVERNMENT SECURITIES.

	CALCUTTA.	BOMBAY.
Five-and-a-half per cent.	113½ to	114½
Five per cent.	107 to	108½
Four & half per cent. (Public Works Loans)	107½ to	108½
15 years' Debenture Loans	108½ to	108
10 years' do. do.	108½ to	108
5 years' do. do.	108½ to	108
Six per cent. Municipal Loans	108½ to	118

## BOMBAY SHARE LIST.

BANKS.	Shares.	Noml. Value per Sh.	Paid up.	Last Div'd.	Rate Share.
Agra Bank	100,000	100	all	pr. st.	98
Bank of Bengal	25,000	1,000	all	9 pr. st.	1,375
Bank of Bombay (New)	10,000	100	all	6 pr. st.	612½
New Issue Do	10,000	100	100	10 sh.	1,500
Bank of Madras	5,250	1,000	all	12 pr. st.	840
Chartered Mercantile	80,000	250	all	9 pr. st.	1,100
Delhi and London	40,000	300	all	all	110
Chartered Bk. of I. & C.	37,000	350	125	5 pr. st.	440
National Bank of India	10,000	250	all	12 sh.	.....
Oriental Bank	.....	.....	.....	.....	.....
<b>RAILWAY COMPANIES.</b>					
P. I. P. E. Co., Consolidated Stock	.....	220	£18-5-0	pr. st.	257
Do New £20 shares	.....	80	100-1-5	do.	185
Bombay, E. & C. I. E. Co.	.....	100	100	do.	1,100
Do New shares	.....	18	190-5-1	do.	200
<b>LAND COMPANIES.</b>					
Apk. st. Land	10,800	1,000	all	50	.....
Ditto New Issue	10,800	1,000	all	11-14	187
Ware Land	8,000	150	all	.....	1,000
Tasagum Land and E.	750	2,000	2,000	nil.	265
Port Canning	4,000	2,000	1,400	nil.	.....
Clabro Company	4,000	5,000	all	70	.....
<b>PRESS COMPANIES.</b>					
Akbar Cotton Press Co.	180	5,000	2,880	250 p. s.	2,860
Albert Press Company, Kurrachee	250	2,000	1,100	75 sh.	775
Alexandra Press Co.	350	3,000	500	nil.	470
Amal Press Co.	150	15,000	11,000	200 sh.	7,200
Amal Press Co.	200	2,000	all	250 sh.	2,335
Amal Press Co. (New)	200	500	all	60 sh.	580
Amal Press Co.	500	1,800	all	800	5,800
Amal Press Co.	550	2,000	all	.....	5,800
Amal Press Co.	180	5,500	all	1,000	9,700
Amal Press Co.	800	3,000	1,800	.....	1,000
Amal Press Co.	200	5,000	all	nil.	2,860
Amal Press Co.	1,000	4,000	2,000	120 p. s.	960
Amal Press Co. & Co.	2,000	400	350	85	455
Amal Press Co.	125	2,500	all	250	2,380
Amal Press Co.	220	2,000	750	75	1,000
<b>SPINNING &amp; WEAVING COS.</b>					
Amal Mills Company	400	2,000	1,700	50	1,875
Amal Spinning Co.	500	2,500	all	125 p. s.	2,555
Bombay	100	5,000	all	.....	3,000
Bombay United	800	1,000	all	25	1,080
Bombay Mills	1,800	150	150	.....	275
Do New	1,800	150	50	.....	.....
Do Spinning	500	5,000	all	.....	2,375
Do Spinning	750	2,000	all	150 p. s.	1,800
Do Spinning	2,500	1,000	all	80	1,180
Do Spinning	900	2,500	all	80	2,275
Do Spinning	600	2,500	2,300	.....	1,725
<b>SHIPPING COMPANY.</b>					
Bombay Shipping Co.	1,000	5,000	3,500	1,800	.....
<b>MISCELLANEOUS.</b>					
Mechanics' Building Co	1,000	80	all	5 p. st.	30
Kurrachee Landing and Shipping Co.	500	2,000	800	25 p. s.	170
Teacher and Company	2,000	500	all	25 p. s.	400

## BANKS AND COMPANIES IN LIQUIDATION.

BANKS.	Date of Liquidation.	Number of Shares.	Amount paid up.	Amount returned.	Rate per Share.
Bank of Bombay	Jan. '66	200	500	25	25
Bank of China	.....	4,000	25	182	1
Bombay Presidency Bank	Aug. '67	40,000	250	.....	.....
Bombay T. and B. Association	Sept. '67	20,000	200	85	6
Brokers' Banking Co.	Sept. '67	20,000	200	40	15
Central Bank	Mar. '66	40,000	250	2	1
East India Bank	.....	25,000	200	14	1
Indian Peninsula Bank	Feb. '67	25,000	200	18	1
Royal Bank of India	May. '67	30,000	200	64	6
Old Financial	Apr. '67	30,000	180	74	1
<b>COMPANIES.</b>					
Back Bay Reclamation Co.	Nov. '66	1,000	5,200	2,375	95
Bombay, and Bengal S. S.	.....	55	5,500	2,440	10
Victoria Spinning Co.	.....	55	5,500	2,400	10

## THE FREIGHT MARKET.

	CALCUTTA.	BOMBAY.
Liverpool	.....	.....
Cotton	22 0s. 0d.	22 15s. 0d.
Cassia	22 0s. 0d.	22 15s. 0d.
Sisal	21 10s. 0d.	21 10s. 0d.
Iron Ships Cotton	21 15s. 0d.	21 17s. 0d.
Wooden Ships	21 15s. 0d.	21 15s. 0d.
Myrabols & Coir bds	20 10s. 0d.	20 12s. 0d.
Sisal	20 15s. 0d.	20 15s. 0d.
Cotton	20 15s. 0d.	20 15s. 0d.
Overland Steamers	4 0s. 0d.	4 0s. 0d.
Isle of Pines via Suez Canal	4 0s. 0d.	4 0s. 0d.
Steamer Cotton	2 0s. 0d.	2 0s. 0d.
Opium	2 0s. 0d.	2 0s. 0d.
Sailing Ships	2 0s. 0d.	2 0s. 0d.
Calcutta Salt	2 0s. 0d.	2 0s. 0d.
Calcutta to Bombay	2 0s. 0d.	2 0s. 0d.
Calcutta to Port Charles	2 0s. 0d.	2 0s. 0d.
Mauritius	2 0s. 0d.	2 0s. 0d.
<b>BOMBAY.</b>		
For Liverpool	.....	.....
Iron ships	22 15s. 0d.	22 15s. 0d.
Wooden ships	22 15s. 0d.	22 15s. 0d.
For London	.....	.....
Cotton	22 15s. 0d.	22 15s. 0d.
Sisal	22 15s. 0d.	22 15s. 0d.
P. & O. Steamer	22 15s. 0d.	22 15s. 0d.
S. & B. Steamer	22 15s. 0d.	22 15s. 0d.
Cotton Steamer	22 15s. 0d.	22 15s. 0d.
Opium Steamer Hong Kong	22 15s. 0d.	22 15s. 0d.

INDIAN SUBCONTINENT.—LONDON

[illegible]

**INDIAN GOVT. SECURITIES.**

INDIAN GOVT SECURITIES.		Closing Prices January 5	Closing Prices January 12
Indian Stock 104 per cent	April 1874	shut	204½ to 205½
Ditto for Account		—	—
Ditto 5 per Cent	July 1860	110½ ex div	110½ to 110½
Ditto 4 per Cent	Oct 1858	101½	101½ to 101½
India Emfaced Paper 4 per Cent		90½ to 90½	90½ to 90½
Ditto 5 per Cent	Jan 1872	98½	98½ to 98½
Ditto 5½ per Cent	May 1876	106½ to 106½	106½ to 106½
Ditto 5 per Cent Rupee Deben	1875	92 to 92	92 to 92
Ditto ditto	1877	107	107
India Debentures, 5 per Cent	Aug 1873	106½ to 106½	106½ to 106½
India Bonds 4 per Cent £1,000		26s prem	27s prem

Am't. of Share.	Paid.	MISCELLANEOUS	Closing Prices, January 5	Closing Prices, January 12
5	all	Bombay Gas (Limited)	6 to 6½	6½ to 6½
5	4	Ditto New	1 to 1½ prem	1 to 1½ prem
20	10	Ceylon Co. Limited	3½ to 3½ dis	3½ to 3½ dis
20	5	Ditto A Shares	3½ to 3 dis	3½ to 3 dis
50	7	East India Land Credit and Finance (Limited)	6 to 6 dis	6 to 6 dis
at 100	100	Madras Irrigation & Canal (guar 5 per cent by the Indian Government)	100 to 102	100 to 102
1	7½	Nerbudda Coal and Iron (Ld)	1/16 dis to 1/16 prem	1/16 dis to 1/16 prem
5	all	Oriental Gas (Limited)	7½ to 8½	7½ to 8½
5	3½	Ditto New	1 to 1½ prem	1 to 1½ prem
50	all	P and O Steam Company	46 to 46	46 to 46
50	10	Ditto, New, 1907	3 to 2 dis	3 to 2 dis

Ask.	Share	Paid.	JOINT STOCK BANKS	Closing Prices, January 5	Closing Prices, January 12
10	all		Agro. Landed, A	7½ to 8½	7½ to 8½
10	—		Do. do B		
20	all		Char. of India, Aus. & China.	13½ to 14½	13 to 14
25	all		Chartered Mer. of India, } London and China	22½ to 23½	22½ to 23½
25	4		Eng. Soot and Aust. Chart	18½ to 19½	16 to 17
100	all		Land Mort. Bank of India, Ltd. Do 5 per cent. Debentures } 1884 for 20 years	8½ to 9½ dis. 81 to 84	3½ to 3½ dis 81 to 84
25	all		Oriental Bank Corporation	40 to 41	41 to 42

# INDIAN RAILWAY DEBENTURES

Principal and Interest Guaranteed by the Secretary of State for India in Council

Debiture Capital	Rate.	COMPANY	Closing Price, January 8.	Closing Price, January 12
\$227,586	5	Bombay, Baroda, and Central India	102 to 104	102 to 104
221,700	5	Ditto ditto	102 to 104	102 to 104
100,000	5 1/2	Ditto ditto	98 to 100	98 to 100
1,222,460	5	East Indian.	106 to 109	107 to 110
1,668,326	5	Ditto	106 to 109	107 to 110
1,800,000	4 1/2	Ditto*	99 to 101	99 to 101
440,000	4 1/2	Ditto*	98 to 100	98 to 100
—	—	Northern Bengali	100 to 102	100 to 102
1,666,670	—	Great Indian Peninsula	100 to 103	100 to 103
1,972,500	—	Ditto ditto	102 to 104	102 to 104
—	—	Ditto	—	—
175,000	800	Great Southern of India	101 to 103	101 to 103
100,000	4 1/2	Ditto	98 to 100	98 to 100
918,670	5	Madras	102 to 104	102 to 104
620,000	5	Ditto	102 to 104	102 to 104
26,000	—	Singh & Rohilkhand Item	100 to 102	100 to 102

\* Transferable by endorsement, without stamp.

## GOLD AND SILVER

Foreign Gold in Bars	175.00	175.00
Silver in Bars (Standard)	80.00	80.00
	10.00	10.00
	10.00	10.00

## EXCHANGE

Backs Drawing rates on Calcutta . . . . . at 30 days' sight. 1s 10 1/2 to 1s 11 1/2  
 1s 10 1/2 to 1s 11 1/2

## Advertisements

MESSRS. NICHOLAS AND CURTIS.

**PHOTOGRAPHERS AND ARTISTS COLOURMEN.—**

Messrs. N. and Co.'s views of Madras, with the recent additions, now comprise the following Taken on 12 by 10 Plates.

Price 8 Rs. each, or 80 Rs. per dozen unmounted.

The Cathedral  
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The Flag Staff, Port.  
Indian Well and Foliage  
The Surf.  
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Boys' Program Station.  
Moorish Tombs.  
The Light House.  
Memorial Hall  
St. Andrew's Church  
Moorish Mosque.  
Parasaserry Pagoda.  
Coconut Palms.  
Date "  
Palmyra "  
Avoca "  
Gaiampan "

Panoramas of the Beach, the Fort, and Black Town and a number of other subjects not specified. Also Views of Ottacamund and all the other stations of the Neilgherries, Bangalore, Seven Pagodas, Tirupatty, Conjevaram, Mysore, the Pulney Hills, Tanjore, Madras, &c

Photographs illustrative of native character in Madras, also Burmese, Nipo-

Detailed Catalogues of all the above may be had on application.

Customers residing in any part of India who have not an opportunity of selecting views for themselves may rely upon Messrs N and, Co, sending the most interesting, when the selection is entrusted to them

JOSEPH GILLOTT'S

**CELEBRATED**

## STEEL PENS

**SOLD**

BY ALL DEALERS THROUGHOUT THE WORLD

**COMMERCIAL UNION ASSURANCE COMPANY**

HEAD OFFICE 19 & 20, CORNHILL, LONDON.

Capital fully subscribed	22 500 000
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Amount paid up	2820.000
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JEREMY GIBBS Esq 9 Adelphi Terrace, W C  
NATHANIEL GRIBBS Esq 1 Kent  
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HENRY TROWER Esq (Trower & Lawson)  
JAMES P. WOODHOUSE Esq, (J C & M Woodhouse.

INDIAN BRANCH-CALCUTTA

No. 1, HARE STREET

### DIRECTORS OF THE INDIAN BRANCH.

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 C. M. BRADLEY Esq. Merchant.  
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 G. WILKINSON Esq. (Messrs. Barnard Sanderson and Upton,) Solicitor  
 and Registrar of the Diocese of Calcutta.

### MEDICAL OFFICERS.

DR. N. C. MACNAMARA, 8, Russell Street Hours 10 1/2 to 12 A.M., Sat.

Dr. S. B. PARMELEE, General Hospital Hours 12 1/2 to 2 P.M.

## BANKERS.

The Oriental Bank Corporation.  
The Chartered Mercantile Bank of India, London and China.

**SOLICITORS.**

**Messrs. Berners, Sanderson, and Upton**

## LIFE DEPARTMENT.

**THIS company** has a **total capital** of **Two Millions** and a **hand** sterling, of which **Pds 500,000** is held up, **automatically guarantee** the **thickness** of its **engagements** with the **Assured**, who are **entirely relieved** from the **personal liability** of **Mutual Offices**. The **importance** of these **considerations** will be **evident** to those who **reflect** on the **operation** of **Life Assurance** companies, **where** the **policyholder** is **not** **entirely** **separated** from the **business** of the **company**, and **is** **investor** in the **names** of **separate Trusts**. The **interest** of **Home** to the **Participation Policyholders** is **unusually good**, as the **company** to be **run** by the **Life Branch** has **been** **limited** by **resolution** **not** to **allow** the **share** of **profits** to **exceed** **one** **third** of the **profits** of the **company**.

The first Life Policy was issued in May 1868. On the 31st December 1869, the Life Premium Income, exclusive of Re-assured Risks, was upwards of 59,000 and at the same date the Life Trust Funds for the Primary security of Life Policies exceeded 189,000 being upwards of fifty per cent. of the amount received upon whole Life Policies then in force, after providing for all Special Policies, and for the Re-assurance Business declared upon existing Policies.

In addition to the security thus afforded, there are the General Investments of the Company, which exceed 800,000, and the unallocated Capital of 2,350,000.

Four-fifths of the entire Profits of the Life Branch are divisible among the Participating Policy-holders.

#### Rates of Premium.

These are generally lower than the rates of other Offices.

Premiums are received—

1. Annually.
2. Half-yearly, Quarterly, and Monthly.

#### Examples of with Profit Rates.

CIVIL.				MILITARY.			
Age next Birthday.	Annual Premium.	Monthly Premium.	Age next Birthday.	Half-yearly Premium.	Quarterly Premium.	Age next Birthday.	Half-yearly Premium.
30	30	Rs. a. p.	30	Rs. a. p.	Rs. a. p.	30	Rs. a. p.
35	47	5 8 2	35	24 7 0	12 7 8	35	24 7 0
40	69	8 8 8	40	27 0 8	13 12 6	40	27 0 8
			45	30 10 11	15 10 2	45	30 10 11

#### Examples of without Profit Rates.

CIVIL.				MILITARY.			
Age next Birthday.	Annual Premium.	Quarterly Premium.	Age next Birthday.	Half-yearly Premium.	Monthly Premium.	Age next Birthday.	Half-yearly Premium.
30	38	Rs. a. p.	30	Rs. a. p.	Rs. a. p.	30	Rs. a. p.
35	48	19 1 1	35	20 12 10	8 9 7	35	20 12 10
40	48	11 2 1	40	24 7 0	4 8 8	40	24 7 0
45	48	12 11 6	45	31 8 2	5 6 8	45	31 8 2

#### Examples of Short Term Rates.

Age next Birthday.	Annual Premium.	Half-yearly Premium.	Age next Birthday.	Quarterly Premium.	Monthly Premium.
CIVIL.			MILITARY.		
30	28	Rs. a. p.	30	Rs. a. p.	Rs. a. p.
35	39	14 9 0	35	10 1 1	3 13 11
40	39	15 1 8	40	11 6 4	3 6 9

#### BONUS.

Policy-holders have the option, when their Policies are unencumbered, of selecting any of the following:—

#### Modes of receiving the Bonus declared

1. By an increase of the sum assured.
2. By a payment in cash.
3. By a permanent reduction of future Premiums.

Examples of Bonus declared on Policies effected in 1869, at the Division of Profits, 31st December, 1869.

Age at entry.	Sum Assured.	Bonus Added.	Yearly Rate of Bonus per cent on Sum Assured.
lbs. s. d.			
30	1,000 0 0	106 0 0	3 0 0
35	1,000 0 0	106 0 0	3 2 5
40	1,000 0 0	106 0 0	3 2 5
45	1,000 0 0	110 0 0	3 4 0

#### Surrender Values.

Policies are purchased by this Company at an equitable value after payment of Premiums for three years.

#### Days of Grace

Thirty days are allowed for the payment of Premiums, when they are payable yearly, or half-yearly, and fifteen when quarterly or monthly.

Forfeited Policies may be revived at any time within six months, if satisfactory medical evidence of the health of the life be produced (at the expense of the Assured) and a fine of one-half per cent. be paid on the sum assured.

#### Claims.

These are paid one month after proof (satisfactory to the directors) of the decease of the Lives assured has been furnished to the Company, and the rate of Exchange will invariably be two shillings sterling per Rupee. Should death occur within the days of grace, the Policy will still be valid, and the sum assured paid after deduction of the Premium. The importance of this last regulation is obvious.

#### Limits as to Residence and Travelling.

Lives assured at Indian rates, who are not sea-faring persons, are allowed to reside or travel without license, in any part of the world provided they do not proceed to any country which is at war.

#### General Regulations.

The English rate takes effect from the date of departure for Europe from Alexandria or Port Said, and the Indian rate from the date of arrival at either of those places outward bound.

Medical Fees are paid by the Company. No Entrance Fee or other payment is required of the Assured beyond the Premium.

The following Agents have been appointed in connection with the Life Department:—

Agra	Unassisted Savings Bank.
Alibabad	C. J. Cooke, Esq., Bank of Bengal.
Aligarh	Messrs. Bullock Brothers.
Banipur	W. Hunter, Esq., Bank of Bengal.
Bihar Districts	J. Alcock, Esq.
Bombay Districts	H. T. Muller, Esq., Bank of Bengal.
Bombay	N. S. Bhat, Esq.
Bombay	Messrs. G. W. Widdoway & Co.
Cannore	W. Reilly, Esq., Bank of Bengal.
Ditto	Bank of Upper India.
Ditto	T. Lucas & Co.
Chittagong	Messrs. Bullock Brothers.
Champanur	James Begg, Esq.
Champanur Districts	E. C. Lamb, Esq.
Cochin	Petres, Leslie, & Co.
Dalhousie	Walter Adlard, Esq.
Delhi	Delhi and London Bank Corporation.
Ditto	H. B. Stenning, Esq., Bank of Bengal.
Dinapore	Messrs. Kelly & Co.
Dacca	N. P. Pogue, Esq.
Jhansi	Razeejee Furdoonjee, Esq.
Kurseong	T. Graham, Esq.
Lahore	Hector Gunn, Esq., Agra Bank.
Ditto	J. D. Walters, Esq., Bank of Bengal.
Lucknow	W. Dickson, Esq., Bank of Bengal.
Ditto	Delhi and London Bank.
Madras	Messrs. Arbuthnot & Co.
Masani Meer	W. Adlard, Esq.
Meerut	Grestham and White.
Muzapore	T. Lucas & Co.
Monghyr	Thomas & Co.
Mussorie	Delhi and London Bank.
Nagpore	T. A. Clarke, Esq.
Patna	Messrs. Kelly & Co.
Ditto	W. Fraser, Esq.
Purneah	P. H. D. de Dombal, Esq.
Rangoon	Messrs. Bullock Brothers.
Rohilkund Districts	H. Costley, Esq.
Sylhet	E. G. Foley, Esq.
Saugor	J. A. Withall, Esq.
Sunla	United Bank of India.
Tirhoot	E. Dalgleish, Esq.
Umballa	United Bank of India.
Ditto	Grestham & Co.

#### Fire Department.

The Fire Premium income of the Company, as at 31st December, 1869, exceeded £120,000.

Fire Insurances are granted at favourable rates throughout Bengal, the North-West Provinces, the Punjab, on Merchandise, Warehouses, Screw-Houses, &c., &c., and on Shipping, &c.

#### Rates for Fire Risks in Calcutta.

	Per Rs. 100				
	12 months	6 months	3 months	2 months	1 month
The Buildings being brick or stone, built, and tiled or roofed with metal, slate, or chunam	4	5	6	7	8
Private Dwelling Houses	4	5	6	7	8
Shops and Warehouses—	4	5	6	7	8
No hazardous Goods or Trade	4	5	6	7	8
Hazardous Goods or Trade	10	12	14	16	18
Warranted that no Jute or cotton in a loose state from or Trade be deposited in the building	10	12	14	16	18
Bonded Warehouse, no Hazardous Goods	10	12	14	16	18
Jute and Loose Cotton	10	12	14	16	18
Presses or Screw-Houses Cotton or Jute (warranted no artificial light used)	10	12	14	16	18
Without such Warranty	14	16	18	20	22

The rates for Mohassil risks may be ascertained from the Manager.

For list of Fire Agents vide advertisements in *Englishman* and *Pioneer*.

Claims settled without reference to England.

Copies of the last Report and Balance Sheet of the Company together with

Forms of Proposals and all further information, may be obtained by letter or on application at the Calcutta Office between 10 and 5; or on Saturdays between 10 and 2.

By order of the Directors of the Indian Branch,

No. 1, Hare Street, Calcutta, 18th February 1871 } C. H. OGBOURNE, Manager in India.

Applications for Agencies will be received from influential Mohassil residents.

#### PHENIX FIRE OFFICE—ESTABLISHED IN 1782, UNLIMITED.

The importance of this Company's transactions with the public may be judged from the fact that since its commencement it has been able to pay 2,000,000 sterling as losses under insured risks and without a single call on its proprietors whose liability is unlimited.

The undersigned are authorized to issue policies in Bombay and the Mohassil at the tariff rates of all the old established company, which are as low as the nature of the risks can justify.

The rates on bungalows in the Mohassil and residences, offices, and godowns in Bombay and Calcutta, have been lately much reduced. Particulars on application at the Agency Office.

No. 3, Rumpart Row, Bombay, 1870.

A. C. BROWN & Co., Agents.

# THE INDIAN LIFE ASSURANCE COMPANY (LIMITED).

Registered under Act X. of 1860.

Head Office: CALCUTTA.

## DIRECTORS.

Chairman, W. McLeary, Esq., *Manager, Bank of Upper India, (Limited).*  
 C. J. Collins, Esq., *Manager, Allahabad Bank.*  
 W. E. Dean, Esq., *Manager, Mercantile Savings Bank.*  
 W. Hobson, Esq., *Joint General Manager, Delhi & London Bank.*  
 J. C. Parry, Esq., *Manager, Simla Bank Corporation.*  
 F. Patterson, Esq., *Unincorporated Service Bank.*  
 C. W. Stewart, Esq., *Barister-at-Law.*  
 E. Warner, Esq.,  
 Shash Behan Bax

## MEDICAL ADVISER.

William Moir, Esq., M.B., Civil Surgeon, Meerut.

## SECRETARY.

D. Lancaster, Esq.

This Company was formed towards the end of 1869, and has already received substantial patronage from the public. The object for which it was established with a full direction in India was to secure the Indian Public against a repetition of such heavy losses as have recently been sustained by the collapse of certain Assurance Offices in England, where the entire management of those institutions was located.

**Security.**—To ensure absolute security the funds of the company are invested only in Government Securities. The company is strictly prohibited from making advances on house or landed property or on stocks shares or other securities of any company whatever though such advances are usually extensively made by other Assurance companies.

Policies are granted for whole life either with or without participation in the profits of the company according to the scale of premiums selected by the assured. Policies are also granted for short terms from one to ten years at moderate rates.

The Proposal Form is simple in its terms and the Conditions of the Policies are liberal all unnecessary restrictions having been removed.

The Rates of Premiums are as moderate as is consistent with complete security of the assured.

**Advantages of Assurance.**—It secures by a small monthly, quarterly, half yearly or yearly payment a provision for widows and children. It affords opportunity of making a small investment for marriage. It enables persons to raise money on life interest. It secures sums of money contingent on parties. It enables debtors in event of death to satisfy their creditors. It enables borrowers property from claims and sureties from loss.

Assurance in a sound company is far superior to connexion with a Pension Fund for in the latter case if the pensioner dies his contributions are forfeited and the subscriber loses the benefit of all he has paid whereas in the case of a Policy it still continues and may be made available for any other purpose.

Forms of Proposal Tables of Rates and all further information may be obtained by letter or on application to any of the Agents or to the Secretary.

## ANNUAL PREMIUMS

Required for an Assurance of Rs. 1,000 for the whole Term of Life

Age	CIVILIANS		MILITARY AND NAVAL	
	Without Profits	With Profits	Without Profits	With Profits
20	Rs. 31 0	Rs. 25 13	Rs. 35 11	Rs. 40 8
30	37 9	42 11	41 11	47 7
40	46 13	53 8	50 15	57 14
50	61 4	69 10	65 7	74 5
60	88 0	103 0	90 0	105 0

D. LANCASTER,  
Secretary

Meerut, 12th November 1870

## IMPORTANT REDUCTION IN THE RATES OF FIRE INSURANCE.

### NATIVE LIVES INSURED ON EQUAL TERMS WITH EUROPEANS.

#### ENGLISH ASSURANCE COMPANY FIRE AND LIFE.

Capital £ 500,000

Head Offices, Palmerston Buildings, Bishopsgate Street, London, with branches at Liverpool, Manchester, Glasgow, Dublin, Southampton, Hamburg, Antwerp, Brussels, Rotterdam, Melbourne, and Bombay.

#### The Life Department

Offers the following advantages—

- I.—Moderate premiums
- II.—One calendar month's grace allowed for renewal.
- III.—Liberal provision for non-forfeiture of Policies.
- IV.—Fixed surrender values after 3 years.
- V.—Freedom from unnecessary restrictions as to foreign residence and travelling.
- VI.—Unconditional reduction to English rates on return of the assured to Europe.
- VII.—Military men holding civil appointments reduced to civilian rates.
- VIII.—Eighty per cent of the profits divided among the assured in the participating scale.
- IX.—No partnership liability whatsoever.
- X.—Medical fees and stamps paid for by the company unless the amount be less than Rs. 2,000.
- XI.—No charge for assignments.
- XII.—Prompt settlement of claims.

#### Fire Department.

Owing to the company being free from combination, Policies are granted, covering property in all parts of the Presidency, at some 25 to 50 per cent. below the rates of other offices in Bombay.

Blanket Policies issued and all reasonable clauses of other companies adopted. Claims settled promptly.

For further particulars, prospectuses, &c., apply to

HILL, POLLOCK & Co.,  
Agents.

Secunder's Buildings, High Street, Bombay.

# THE MADRAS EQUITABLE ASSURANCE SOCIETY.

Successor to Madras Laidlaw Society, Established in 1829.

Regulated by Act No. 8 of 1860, of the Legislative Council of Port Saint George.

HEAD OFFICE IN MADRAS AND NO BRANCHES.

## BOARD OF DIRECTORS

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 W. Scott, Esq. (Biny & Co)  
 H. G. PRICHARD, Esq. (Government Solicitor.)  
 The Hon. A. F. BROWN (Parry & Co)  
 R. C. WALKER, Esq. (C. Shand & Co.)

## ACTING MEDICAL EXAMINER.

W. H. HARRIS, Esq., M.D.

## SECRETARIES AND TREASURERS.

Messrs ARBUTHNOT & Co.

The Chief characteristics of this Society are  
 Claims paid immediately after satisfactory proof of death  
 Announcement of death in the Port Saint George Gazette, sufficient in the case of the members of the civil and military services  
 Medical fees paid by the society on all proposals  
 Mutual Assurance

Policies for a term of years issued at reduced rates, without participation in Surpluses  
 Premiums payable half yearly, on 1st January and 1st July  
 Policies issued free of charge for stamp duty

Assurers may reside in any part of the world, so long as they continue to pay the original rate of Premium stipulated in their Policies  
 This society being founded on the sound principle of Mutual Assurance, divides all its surpluses or so much thereof as it deems expedient, amongst the Members or Life Policy Holders, in the form of Premiums, and

for the benefit of a select body  
 The Members of the society consist of all persons who hold Policies of Assurance upon the lives of others, and are domiciled in Madras, and are elected by the Members of the Society.

The society's funds can be invested only in securities of the Government of India, or in securities, the interest of which is guaranteed by the Government of India, or by the Secretary of State for India in Council.

At least three names of the Directors.  
 Annual Meetings of the Members are held at Madras, not later than the 1st of January, and every year.

An annual audit is made of the accounts of the society, and the reports of the Auditors submitted at the Annual General Meetings.  
 Resolutions made by a London Actuary, of all the Assets and Liabilities of the Society, made as from 31st December 1870.

Premiums paid on Policies for the whole term of life during any portion of the period of five years immediately preceding that date will be paid to the Holders of such Policies to participate in the surplus of the Society then or to be existing by valuable deduction from Premiums thereafter becoming payable for the ensuing Quinquennium.

The returns made to the Policy Holders from the formation of the society in January 1842 up to June, 1869 inclusive (in addition to the accumulation of a considerable reserve), have averaged 47 per cent upon the Premiums paid half-yearly.

For further particulars, Forms of Proposal, &c., apply to

ARBUTHNOT & CO.

Madras, January 1870

Secretaries and Treasurers

# THE BOMBAY FIRE INSURANCE COMPANY (LIMITED)

The undersigned are prepared to Accept Risks and Issue Policies covering Merchandise Goods in Godowns, Warehouses, Dwelling Houses, or other insurable property on favourable terms.

Apply to

FORBES & Co.,

Bombay, 1st February 1871

Secretaries and Managers

# ALLIANCE BRITISH AND FOREIGN LIFE AND FIRE ASSURANCE COMPANY.

ESTABLISHED 1824.

## CHIEF OFFICE

Bartholomew Lane, Bank, London E. C.

## BOARD OF DIRECTORS.

PRESIDENT—Sir Moses Montefiore, Bart., F.R.S.

## DIRECTORS.

James Alexander, Esq. (Alexander, Fletcher & Co.)  
 Charles George Barnett Esq. (Barnett, Hoare, Manbury, and Lloyd)  
 George Henry Barnett Esq. (Glyntham Park)  
 James Fletcher, Esq. (Alexander, Fletcher & Co.)  
 William Gladstone, Esq. (Thames Bank & Co.)  
 Right Hon. George Jacobus Gochen, M.P.  
 Samuel Gurney, Esq.  
 James Holme, Esq. (Director of the Provincial Bank of Ireland)  
 Sir Curtis Miranda Lampson, Bart.  
 Sampson Lucas, Esq. (Lucas, Nicholls & Co.)  
 Elliott Macnaghten, Esq. (Member of the Indian Council)  
 Thomas Masterman, Esq. (Director of the Bank of Ireland)  
 Joseph Mayer Montefiore, (Director of the Bank, New Court)  
 Sir Anthony De Rothschild, Bart., New Court  
 Baron Lionel Nathan De Rothschild, M.P.  
 Thomas Charles Smith, Esq. Oxford Square Hyde Park.

## AUDITORS.

Lord Richard Grosvenor, M.P.  
 Hugh John Smith, Esq.  
 Richard Hoare, Esq.

## FIRE RISKS

Of an eligible character are accepted at minimum current rates.

## LIFE DEPARTMENT

The non-participating rates of premium for European lives resident in India have been very materially reduced, and the undermentioned Agents are authorised to decide upon Proposals submitted, to issue Policies, and to settle claims.

The Life Reserve Fund is over

NINETY-FOUR LACS OF RUPEES.

(which is irrespective of and in addition to the paid-up capital and the Fire Reserve Fund), being about 80 per cent of the sum assured under the Company's Life Policies, and besides this there is the guarantee of a substantial Capital of not less than

FIVE CRORES OF RUPEES

coupled with the personal responsibility of a numerous body of wealthy Proprietors. For detailed Prospectuses, Forms of Proposal, &c., apply to

REMINGTON & Co.,

Agents for the Presidency of Bombay.



## CHURCH OF ENGLAND ASSURANCE INSTITUTION.

ESTABLISHED 1840.

Empowered by special Act of Parliament 4 &amp; 5 Vic., Cap. XCII.

CAPITAL—One Million Sterling.

Life Assurances of every description granted.  
 Marine Provision combined with Life Assurance.  
 Free Policies issued which can never altogether lapse through non-payment of Premium.  
 No extra charge for sea-passage.  
 Reduction to European rates without Medical examination.  
 Premium may be paid annually, half-yearly, quarterly, or monthly, as desired.  
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Bombay, 12th July 1870.

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## Liability of Shareholders Unlimited

Capital £2,000,000	Accumulated Funds £3,301,005
Reserve	Invested Funds
Fire Premiums ..... £ 236,815	Capital ..... £ 361,752
Life Premiums ..... 450,058	Life Reserve ..... 1,878,020
Interest ..... 162,830	Reserve Fund ..... 971,410
	Undivided Profit ..... 64,823
£ 1,340,835	£ 3,301,005

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Policies of Insurance against Fire upon Dwelling Houses and other Buildings in both the European and Native parts of the Island of Bombay, are issued by the undersigned on behalf of the Company.

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## NORTH BRITISH AND MERCANTILE INSURANCE COMPANY.

INCORPORATED BY ROYAL CHARTER AND SPECIAL ACTS OF PARLIAMENT.

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Fire Premium Reserve...	138,514 15 1
	465,668 5 11
Total Accumulated Funds...	2,538,118 18 11
Annual Income from Fire, Life and Investments...	801,801 12 9

AGENTS IN BOMBAY,  
 W. NICOL & Co.

## THE SOUTHERN INSURANCE COMPANY, (LIMITED.)

REGISTERED CAPITAL—ONE MILLION STERLING.

Paid-up Capital .....	£ 100,000
Reserved Fund .....	£ 40,000

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**ARMY DEPARTMENT.**—Military, Regimental, and Mass Indents of all kinds promptly and economically executed.

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Hardware	D. N. HOLMES & Co.	London.
Hardware	DAVID JONES	Birmingham.
Ink Printing	S. KELLY & EDWARDS	London.
Jewellery	HARRISON & Co.	London & Birmingham.
"	FARADAY & DAVEY	London.
"	MADDER & SON	London.
"	MATHER, MACDONALD, MACDONALD	London.
"	J. JONES & WATKINS	London.
"	SAM. WOODMAN & Co.	London.
"	ALICE MORRIS	London.
"	HOPKINSON & COPE	London.
"	V. & J. JONES	London.
"	J. WHITE	London.
"	ULLATHORPE & Co.	London.
"	DART & Co.	London.
"	LOWENTHAL & SOLES	Frankfurt.
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Select parcels of Watches, Jewellery, &c., are now on hand. Consignments of choice Wines, Printing Presses, and Inks, Printing Paper, Sewing Machines, &c., are daily expected.

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BY APPOINTMENT.

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Indian Pianofortes.

Brilliant and Sweet new Cottage 7 Octaves, with three Unisons throughout.  
 New Cottage Grand, with three Unisons in Treble and Bass.  
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 COLLARD & COLLARD'S Sympathetic 7 Octaves.  
 Semi-Grand 7 Octaves with Unisons throughout.  
 Boudoir Grand 7 Octaves, with Unisons throughout.

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A consignment of the above expected very shortly from Germany. These instruments are made expressly for India, and will be sold at 20 per cent. below the usual price charged for similar instruments in Calcutta.

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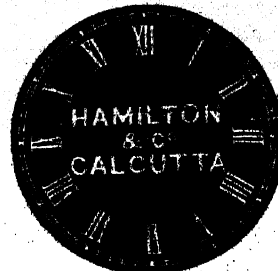
Calcutta, April 1870.

C. GOULD,  
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IN FINE SILVER, double-bottomed, engine-turned hunting case, of medium size, and with a first-class full plate Lever movement.

Rs. 50 Cash.



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# THE Indian Economist.

A Monthly Journal devoted to Economic and Statistical Inquiries concerning India.

Vol. II.]

CALCUTTA, WEDNESDAY, 15TH MARCH, 1871.

No. 8.

## Advertisements.

### OVERLAND ROUTE.

THE Peninsular and Oriental Company book passengers and receive Cargo and Parcels by their Steamers for—

Aden	From Bombay every Saturday at 5 P. M.
Suez	
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Malta	
Gibraltar	
Southampton	
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Every alternate Thursday at noon.	
Every fourth Thursday at noon.	

Cargo can also be booked through to Trieste, Odessa, Naples, Venice, Genoa, Barcelona, Havre, and Liverpool.  
A 10% discount has been made in the Tariff of charges for small parcels to England.

For further particulars apply to  
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### AUSTRIAN LLOYD'S STEAM NAVIGATION CO.

MONTHLY LINE OF STEAMERS BETWEEN BOMBAY AND TRIESTE, VIA SUEZ CANAL.

THE Company intends to despatch every month a Steamer from TRIESTE to BOMBAY, and vice versa.

The "SPHINX" 1,400 Tons, will be despatched from Bombay about the 28th March, and the "APIS," 1,400 Tons, about the 1st May. These steamers have limited accommodation for a small number of Passengers. The rates for Cabin Passengers include food and table wine, transit through Egypt, and free conveyance of 8 cwt. luggage.

#### PASSENGER RATES FROM BOMBAY.

	Cabin.	Deck	with food.
To Aden	£ 18		£ 7-18
To Suez	28		13-7
To Port Said	30		14-6
To Trieste	40		19.

Cargo taken for Trieste, also for Venice, Constantinople, and Odessa, Aden, Egypt, England and the Continent generally.

There is also a weekly service by Mail Steamers between Alexandria and Bombay. The "APIS" will be despatched from Alexandria to Bombay about the 1st of March, and the "SPHINX" from Bombay to Alexandria about the 1st of May. These steamers have limited accommodation for a small number of Passengers. The rates for Cabin Passengers include food and table wine, transit through Egypt, and free conveyance of 8 cwt. luggage.

Passengers by the P. & O. Co.'s steamers to Suez can have their luggage forwarded by the company's steamers to Southampton, at a charge of 10s per cwt. to which the Austrian Lloyd's Agent at Suez will attend.

The undersigned Agents also passage tickets for the steamers plying between Alexandria and Trieste, and for the railway between Suez and Alexandria.

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FIRST CLASS ..... £18 | SECOND CLASS ..... £9  
Children under 10 years at HALF FARE; under 2 years, FREE.  
REDUCED FARES FOR FAMILIES, consisting of not less than 3 adult persons travelling together:—FIRST CLASS, £10-16 per head. SECOND CLASS, £7-10 per head.

Railway Tickets from SUEZ to ALEXANDRIA, with all the privileges of passengers by the P. & O. Co.,—FIRST CLASS, £3; SECOND CLASS, £2; CHILDREN over 8 and under 10 years at HALF FARE.

In conjunction with the Austrian Lloyd, Cargo for Trieste and Venice can be booked through from Bombay by the P. & O. Co., and the Bombay and Bengal Steamship Co., and via Bombay from the various ports touched at by the steamers of the British India Steam Navigation Company.

#### TRANSHIPMENT SERVICE AT PORT SAID.

Goods for Trieste, Venice, Odessa, and ports on the Syrian, Turkish and Greek coasts, shipped by steamers under any flag whatever from Japanese, Chinese and Indian ports bound to Mediterranean or British port via Suez Canal, are received and transhipped by the Austrian Lloyd's Agents at Port Said, and forwarded to their destination by the company's regular line of steamers.

For further particulars, and for freight and passage apply to the Agency of the Austrian Lloyd's Steam Navigation Company.

Bombay, 3 Ash Lane, 29th Feb. 1871.

A. C. GUMPERT,  
Manager.

### STEAM COMMUNICATION WITH KURRACHEE.

THE British India Steam Navigation Company (Limited), UNDER MAIL CONTRACT WITH GOVERNMENT, and in connection with the weekly service from England, despatch a steamer to Kurrachee every Monday at noon.

Bombay, 1870.

W. NICOL & Co., Agents.

### STEAM COMMUNICATION WITH ITALY, VIA SUEZ CANAL.

MESSRS. R. RUBATTINO & Co.'s Italian Mail Steamers are running between GENOA and BOMBAY, calling at LERNO, NAPLES, MESSINA (occasionally ALEXANDRIA), PORT SAID, SUEZ, ADEN and vice versa.

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INCLUSIVE OF ALL TRANSIT FEES THROUGH THE SUEZ CANAL.

	1st Class.	2nd Class.	3rd Class.
To Aden	£22	£16	£4
" Suez	28	22	8
" Port Said	30	24	9
" Alexandria	32	26	9-10
" Messina	34	28	10
" Naples	36	30	11
" Leghorn	38	32	12
" Genoa	40	34	13
" Trieste	42	36	14
shipment at Genoa	52	35	14-10

Children under 3 years, free of charge. Children not above 10 years are free.

Passengers are allowed to break the voyage at any of the above named Mediterranean ports, and are free to resume it by any of the Company's steamers to the port of destination marked on their tickets.

Passengers returning within six months of their departure from Bombay by the steamers of this company, are entitled to a reduction of 20 per cent. on the return fare.

Berths may be secured in advance by depositing half the Passage Money.

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VOLKART BROTHERS,

Bombay, 18th December 1870. Agents, Rubattino Steam Navigation Company.

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Bombay, January, 1870.

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### STEAM COMMUNICATION WITH THE MALABAR COAST, CEYLON, MADRAS, AND CALCUTTA.

THE British India Steam Navigation Company (Limited), UNDER CONTRACT WITH GOVERNMENT, despatch steamers as above with Mail, Passengers, and Cargo, every fourteen days.

This route is the most expeditious and economical for passengers from the Gherry district, Bangalore and Madras, who can take the steamer and proceed from thence by rail.

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Bombay, January 1870.

W. NICOL & Co., Agents.

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The Pier.	M. of R. (1 View)
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Munro Statue.	M. of R. (3 Views)
Neil Statue.	M. of R. (4 Views)
Club.	M. of R. (5 Views)
Napier Bridge.	M. of R. (6 Views)
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Government Office, Fort.	M. of R. (11 Views)
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Panoramas of the Beach, the Fort, and Black Town, and a number of other subjects not specified. Also Views of Coonoor, and all the other stations of the Netherland, Bangalore, Seven Pagodas, Thripunithur, Cochin, Mysore, the Pulney Hills, Tanjore, Madras, &c.

Photographs illustrative of native character in Madras, also Burmese, Nicobar, and Andamanese, &c.

Detailed Catalogues of all the above may be had on application.

Customers residing in any part of India who have not an opportunity of selecting views for themselves may rely upon Messrs. N. and Co. sending the most interesting, when the selection is entrusted to them.

Madras, April 1870.



# THE Indian Economist.

A Monthly Journal devoted to Economic and Statistical Inquiries concerning India.

VOL. II.]

CALCUTTA, WEDNESDAY, 15TH MARCH, 1871.

No. 8.

## The Indian Economist.

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### A LAST WORD UPON THE WAR.

PUBLIC opinion is gravitating rapidly towards the conclusion we have expressed from the commencement of the war of the dangers to be apprehended from Prussian ascendancy in Europe. "Notions of right," says even a German journal, "are giving way more and more to the most brutal policy of force, and diplomatic plotting is taking the place of international intercourse." On the whole, says the *New York Tribune*, "it seems very much the exact truth, that all treaties have become valueless. At this hour Europe lies helpless in the presence of the army of Prussia and the indefinite menaces of Russia. The map is to be made anew, and changes may be preparing that no one dreamed of when Napoleon blundered into war in July." Even on the simplest question, says another German paper, the *Neue Freie Presse*, "no understanding can be arrived at between the Cabinets." The same journal reflects bitterly (December) upon the English Ministry:—"Perhaps England, if she were not ruled by men who have lost every conception of her former commanding position in Europe, would be the Power which could bring about a coalition for the purpose of mediation between the belligerents. But as England will absolutely run no risk, she might as well, for this purpose, have ceased to exist; and thus one of the essential factors for a possible restoration of peace is wanting. It is therefore only so much the more disgraceful that no step is put to the butchery which has now become almost senseless, that no hand is moved to act quickly and decisively in the name of the indignation which already pervades all enlightened circles in Europe."

The great party represented by the *Fortnightly* and *Contemporary Reviews* have been writing in yet stronger terms. "We urge, say Mr. Ludlow, Mr. Harrison, and others, "that the English Government should call upon that of Prussia to make peace on reasonable terms, not including the seizure of French territory. Failing this, in our opinion, England,

"without further delay, should join France in her resistance and declare war against Prussia." They declare Prussia to be a great military monarchy of whose dangerous character and power "we have had abundant proof, threatening by its pretensions to European peace and fatal by its constitution to European freedom."

Our only quarrel with all this is that it was not said before. "It takes a long time," says "J. M. M." in the *Bombay Gazette*, "to awaken the British nation, but we are now gradually coming to our senses. We begin to remember that the German Empire, which has been revived at Versailles, inherited the evil traditions as well as the titles of Imperial Rome, and was remarkable, as the annals of Italy can tell, for an overbearing foreign policy and an insatiate love of conquest. We recall, too, the history of Prussia for the last two hundred years, and more especially since her destinies have been guided by a statesman who knew how to turn the desire of the Germans for unity to the sole profit of the House of Hohenzollern. We note the manners of the people, and the fruit of the culture of which they boast. We see that political and social progress owes nothing to Prussia, while the vital spark of liberty could not be extinguished in France even by the Empire. The true ally of Prussia is not England but Russia; and this Bismarck understood when he began the intimate connexion between the two arbitrarily governed Northern Powers, by concluding the secret treaty which obtained for Russia the active co-operation of Prussia in putting down the Polish insurrection of 1863. From that time the policy of the two Powers has been identical, having for its objects, to humble Western Europe and to make Prussia supreme in Germany and Russia in the East. All this we are beginning to understand now, and you hear English Liberals asking one another whether Lord Palmerston was not, after all, in the right when he took the alliance with France as the cardinal principle of his foreign policy, and eagerly acknowledged the French Empire, because he believed Napoleon would see the advantage of that cordial agreement between France and England which Louis Philippe's Ministers thought lightly of. We feel now that we are standing alone in the world."

When the history of this war comes to be written, the protest of the *Indian Economist* against the course pursued by the English press will, we believe, be more than justified.

It is not ceable that even the *Times* has at last discovered that the resolution taken by France in this war to defend, or recover her own position, by the abasement of a formidable rival, was simply such a determination as would have been adopted by any State under similar circumstances a century ago; and that whether the war was made by the French people or the French Emperor, it was certainly not a war which the world would have considered wicked or unjustifiable in 1870." It is a reflection upon our character, as a people, that journalism of this order should not merely be tolerated amongst us, but should be influential. The war was an act of "atrocious criminality" in July. In December, it is declared to have been a war which any State would have entered upon a century ago, and which no one at that time would have regarded as either unjustifiable or wicked. And by July next, the same journal will be assuring the world, that the war was necessary, and unavoidable, and right. By that time, the fallen Emperor's quotation of Montesquieu's reflection that "not he who declares war, but he who makes it inevitable, is its real author," will be recalled, and accepted, and justified, by the very writers who covered

him with the foulest abuse when he first uttered it. If ever one Power deliberately provoked another into a declaration of war, this guilty Power (Prussia) did so in the present case. The attempt to place a Hohenzollern upon the throne of Spain by a secret *coup-de-main*, in violation of its plighted honor that it would make no such attempt was, as we have pointed out from the first, the real occasion of the war. English journalists have either ignored the provocation altogether, or have insisted that the mere withdrawal of the candidate was a sufficient *amende* to France. Had it been England instead of France, they would have thought differently; for the offence was deliberate, and premeditated, and treacherous. It was an open menace to France, while the intrigue was marked by dishonor and falsehood up to the moment of its betrayal by the Spanish Minister. In similar circumstances, England, we say, would have demanded precisely what France did—an express assurance on the part of the Prussian Court that the intrigue would be abandoned, and not a second time renewed. By refusing to give that assurance, and ostentatiously flouting the refusal in the face of the French Ambassador, the Prussian King made war inevitable; a war which he and his instrument had been secretly preparing for, on a scale which has astonished the world. The guilt of this war belongs not to the French Emperor, who it is now admitted even by the *Times* "shrank from it," but to the very same Power which, by the partition of Poland a century ago, plunged Europe into the bloodshed and confusion that subsequently filled the Continent; and that now by the dismemberment of Denmark, has again lighted a conflagration which will yet wrap the civilized world in flames. English journalists who justify the conduct of this guilty Power, and charge upon the French Emperor the present war, shew simply their want of acquaintance with the past, and want of insight into the present, facts of history.

A CORRESPONDENT ("E.O.") of a local contemporary wants to "know of what crime Germany has been guilty, save that she has been successful in a life-and-death struggle with France, to induce English opinion to turn against her now?" The writer himself supplies the answer in the very next sentence of his letter. He says with perfect truthfulness:—

"At first all England was with Germany. It was terrible to think of France victorious, of all Europe once more turned into a French camp, with Great Britain isolated, left alone to cope with the huge military tyranny. That night-mare has passed away."

Yes, the night-mare has passed away; but while it lasted Englishmen were as unable as "E.O." to understand what it was really passing upon the Continent. It seems to be forgotten that this is the third war into which Prussia has plunged the Continent within the short space of seven years. The English papers, until lately, completely ignored the fact that within the six years preceding this last struggle Prussia had plunged into two wars without a pretext of right in either. There was first the Danish war, concerning which the *Edinburgh Reviewers* told us in 1866 that "upon King William of Prussia and Bismarck rests in this age the first unprovoked and wanton shedding of the innocent blood of their own subjects and countrymen, for no object but their own aggrandizement, arrogance, and ambition."

It is impossible to accuse the *Reviewers* of any anti-Prussian prejudices, for they sympathized with the aspirations of the German people for unity. They nevertheless declared the Danish war to have been a most guilty and "wanton shedding of innocent blood." In the war of 1866, the case was even worse. The Prussian people themselves were so alarmed at the guilt of that war, that they gathered together in crowds in the chief cities of Prussia, to wash their hands of all complicity in it. The *Edinburgh Reviewers* again wrote:—"It is now clear that the determination of William I. and his advisers to keep under arms a larger body of troops than had served his predecessors was not without an object. They were designed to attack and plunder his neighbours. The most extraordinary circumstance in the present situation is, that it has been brought

about not by the military power of France, but by Prussia. Throughout these transactions, Prussia meant this quarrel, and has gone to war because, in the opinion of her daring and unscrupulous Minister, the time is come to strike a great blow for the headship of Germany, and to destroy and absorb most of the smaller States and territories." At the same time, the *Westminster Reviewers* pointed out that "Austrian statesmen counted on the loyalty of the King (the pious William), and when at last the crisis was found to be rapidly approaching, it was too late to complete the necessary preparations."

Colonel Chesney in his review of the war, pointed out that "the triumphant success of this great military conspiracy against the existence of her own confederates and others, could not efface the recollection of the scandalous duplicity and falsehood on the part of the Prussian Court (the pious King William) which marked every stage of those transactions."

Colonel Chesney chose the right word when he said that the Prussian Court had engaged in "a great military conspiracy" against public order. In King William's address to his people upon the outbreak of the war, the premeditated nature of the enterprise was openly avowed. The King said:—"In anxious anticipation of what has now taken place [the war he had forced upon Austria], I have been forced for years to consider it as the first duty of my royal office to prepare Prussia's military resources for a strong development of force."

And yet all this while the aged hypocrite had been making solemn protestations of his friendliness towards Austria, and desires of peace with her. Not a pretence of grievance was there against Austria for the war, nor against Saxony, nor Hanover, nor Baden, nor South Germany. The wrong-doer had secretly prepared for "a great development of force;" and the success of a conspiracy which was marked by every circumstance of falsehood and dishonour, was declared by him to be a token of "the evident favor of God." We have seen no such fanaticism in modern days. Bismarck was as explicit as his master, but a little less refined; and these two men between them have put an end to all peace in Europe for the present. By trampling upon public law, spurning the obligation of treaties, and placing the adult population of Germany in arms under the command of a needy class of nobles devoted to the Court, they for the present hold Europe at their mercy. The late war was the work of these men and of no others. To secure the Empire of Germany, it was necessary to fight France. The Spanish intrigue was therefore engaged in with the full knowledge that it would bring it about, and while the French Emperor was seeking disarmament and even disbanding 90,000 men, our pious King and the Minister of his ambition were manufacturing 3,500 pieces of field artillery in Krupp's foundries, preparing indeed for another "great development of force." The reign of "blood and iron" is now fully set up, while the English press, until lately, was falling down before it and worshipping it.

It is to the credit of the Indian press that it has shown a different spirit in its out-look upon this war from that of English publicists. In this country, there has been much honest sympathy for France, and just indignation at her adversary. Indian publicists, with an exception here and there, have refused to bow down before the guilty Court which within the short space of seven years, has plunged Europe three times into war, for no purpose whatever but its own aggrandizement, while making impious appeals to the Most High of the purity of its arms, and the righteousness of its cause. A more hateful spectacle has not been witnessed in history. The guilt of unprovoked war is so deadly, that the properly constituted mind instinctively revolts at seeing its prosecution associated with the name of God.

It is observable that already some of the bitterest denunciations of the fallen Emperor are beginning to discover the claims which he has upon our respect. We are reminded by them "of his really great qualities as an administrator and ruler; and that the Bourbons, in a want of tact or sympathy, will cause the people to remember the civil government of the Emperor, his public works, his leniency to the peasantry, and the glory which preceded his fall." The French, when calumny and the power of



"judging reasonably shall have returned, are not likely to forget that the Emperor fought hard to keep France in the van of the world, and as the clouds which now obscure the Emperor's fame roll away, the system will be blamed, and not the man, and it will probably come to pass, if the Bourbons show any of their traditional incapacity to understand the Revolution, that the Prince Imperial will be accepted as the heir of the principles of the Revolution."

We have nothing to unsay concerning either the war or the Emperor. We regard both just as we did at the outbreak of the strife. As to Louis Napoleon, France and the world have lost a great statesman through cynical disbelief in him as a *parvenu*. The very mistakes of the man bore a statesman's impress upon them. There was nothing of littleness or of meanness in his failures. The attempt to found under an Austrian Archduke a monarchy of Latin race and faith side by side with the Teutonic Republics of America was a great conception. Does it become Englishmen who were imbued with prejudices so deep in the American war that they declared the success of the North to be impossible, to reproach the French Emperor with the fact that he, in common with all Europe, shared the error? The Emperor believed, as all England did, that the States would break up into several independent Republics; and the idea took possession of his mind that, side by side with these Teutonic Protestant Powers, it was desirable for the world that a Latin kingdom should arise as their counterpoise, and in some respect their exemplar. There was nothing little in the conception, nothing unworthy in it, however mistaken it all was. Had he placed a Bonaparte upon the Mexican throne, we might have taken exception to his course as suggested by family ambition; but to show that towards Austria he had none but generous feelings, he advanced with open hand to words her to make as it were such atonement as he properly could for the war which humanity had forced upon him in 1859. The abuse heaped upon him for the failure of the Mexican expedition was purely cynical. Louis Napoleon basely betrayed, we were told, the Archduke Maximilian, when he bowed to the necessity of declining a contest with a Power which had a million of soldiers under arms ready to march against the small body of French forces in the country. He was guilty of cowardice and treachery for counselling the unfortunate Maximilian to yield to the inexorable logic of events. Such criticism is purely malignant. Again, he was made the object of bitter and incessant denunciation for the occupation of Rome by the French troops. To the Reds we have nothing to say upon the subject; but to Englishmen we may surely point out the peculiarly difficult position which the French Emperor ever occupied towards Rome. That in determining to defend it from the aggressions of the Revolutionists, he was influenced by something of that constitutional tendency towards the support of the weak against the strong, that marked his whole career, we have no doubt whatever; but what Englishmen ever gives due weight to the fact that the French Emperor in his support of Pius IX, simply gave expression to the earnest wishes of the whole Catholic population of the world? We may personally sympathise with Garibaldi and Mazzini, and rejoice to see Rome become once more the secular capital of Italy; but let us be just. A multitude of our fellowmen, probably a hundred millions, look upon the seizure of the temporal dominions of the Pope as sacrilege. Nothing is more certain than that, in the protection he afforded to the aged Pontiff, Louis Napoleon had the approval and sympathies of many times the number of the comparatively small body of men who desired to see Rome secularized. It was no reproach to the Emperor that he protected the Pontiff against the revolutionary forces which sought his overthrow. It was characteristic of the man to do so. It was the wish of more than half Christendom that he should do so, while he exposed himself to the vehement attacks of the Liberal party, and the constant danger of assassination as his reward. Mazzini's fiery denunciations and the indignant declamations of Garibaldi were natural enough, but what just ground has there been for the violent attacks of English Liberals upon him for his course? The

French and English press between them have pulled the Empire down, and now stand face to face with the feudal despotism which has its iron heel upon Germany and the grip of its mailed hand upon Europe, and hardly know what to make of the new situation.

BETWEEN four and five months ago, we pointed out that if Prussia were allowed to retain Metz the legitimate influence of France in Europe would be destroyed. The *Times* was simultaneously insisting that the cession should be made. It has at last discovered that the interests of Europe will be fatally compromised by the transfer of the fortress, since Metz lies so close to the heart of France that its occupation by the Prussians will reduce France to a second-rate power. We pointed that out five months ago, but the great English journal seems never to understand events until the opportunity for speaking upon them is lost.

### FRENCH FINANCE.

A CORRESPONDENT of the *Economist*, in commenting upon the immediate necessities of French finance, pays a timely and well-merited compliment to our unfortunate neighbours, when he says that "no nation in the world has proved itself to be more sensitive to its duty as respects monetary obligations than France. Through good and through bad report, in high prosperity no more than in the lowering clouds of adversity, that Government has given constant proofs of its firm adherence to its obligations." The remark is made *apropos* of a rumour that the Bank of France has been directed to make a forced issue of notes to the amount of sixty millions sterling, and that the Government had decreed the further postponement of the obligation to take up commercial bills of exchange until the termination of the war. "These are laws," says the writer "of a special nature, made on the pressure of imminent danger to the life of the nation, and therefore not amenable to be tried by the strict test of financial economy. It is exactly analogous to an individual at a pinch falling back upon his capital stock to meet his engagements and keep himself afloat when ordinary business is suspended and profits are nil. We ourselves had resort to the same expedient, essentially, during the great war at the beginning of this century; we suspended cash payments, recovered our financial position, and enabled the Bank of England to resume the high credit which theretofore, and from that time forth, it has held."

English writers have not always been thus fair to the finances of other nations. It is impossible to recal without some shame the incessant carping with which the financial arrangements of the Americans in their terrible struggle were followed in London, while the insight and skill with which those arrangements upon the whole were conducted, are now universally admitted. (A different spirit, we trust, will characterize the national criticism upon the financial arrangements of our neighbours in surmounting their embarrassments. The science of finance is nowhere better understood than in Paris, and if a settled Government can but be established, we have no fear of France making shipwreck in this direction. We may recal with advantage in this crisis of the nation's fortunes, a fact concerning English criticism upon their finance, which few persons perhaps in India remember. When the Revolution took place in February 1848, the funds in the Bank of France amounted to 226,000,000 francs. They declined so rapidly that on the 15th of the next month they had fallen to 59,000,000. In this extremity, the Provisional Government came to the rescue of the bank, and on the night of the 15th March, made the notes of the bank legal tender to the extent of 350,000,000 francs. Twelve months afterwards (16th Feb. 1849) the editor of the *Times*, in reviewing this decree, and after adducing many matters of detail to shew how wonderfully beneficial to the nation those proceedings on the part of the Government and of the Bank of France had been, concluded his remarks by saying—"We cannot do more than present our readers with this brief outline of these masterly operations; but when it is remembered that they were

"conducted in all the gloom and terror of an unparalleled revolution, when the Government lay prostrated before the mob, and property itself was openly assailed, this narrative of dry financial entries assumes the importance and the dignity of an heroic resistance to adverse circumstances, and in the very first rank of those who rescued France from the jaws of bankruptcy, and society itself from dissolution, we place without hesitation the patriotic and able conductors of the Bank of France."

The *Times* had forgotten that on the 18th of March 1848, at the time when the decree was passed, it had written as follows:—"To suppose that the decree of the Provisional Government can restore confidence, or, in other words, the nominal value of the notes, is ridiculous. . . . The suspension of cash payments by the Bank of France . . . is the most decisive event of the tremendous commercial crisis which at this time accompanies and aggravates the political embarrassments of France. . . . To any one who is at all familiar with the commercial habits of the French people, and the ordinary resources of the Bank of France, this statement of its present condition is of the most distressing kind; and the actual suspension of cash payments at such a time and among such a people will produce the worst effects."

Now a lesson of this nature ought not to be lost. As a race we are far too apt to make ourselves the censors and judges of all other people, and of the propriety of their doings. Should the report alluded to by the *Economist* prove to be true, and the French Government decree a large issue of inconvertible notes, we believe it will be justifiable, and that by no other means is the nation so likely quickly to regain prosperity. The objection to such issues on the part of Englishmen generally is founded deeper in prejudice than in sound reason. French financiers will do well to study carefully the financial arrangements at Washington, which carried the United States safely through difficulties which constantly threatened to overwhelm them; and English critics will do well to maintain the spirit of forbearance which the correspondent of the *Economist* so well illustrates.

#### LAND REVENUE IN THE PUNJAB.

The following articles contain matter of so much importance, that we think it desirable to reproduce them in our own leading columns, persuaded that it is here, as we so constantly insist that the true solution of our financial embarrassments is to be found.—ED. I. E.

##### (Indian Public Opinion.)

We have on various occasions commented on the extraordinary remissness of the Government, as it appears to us, in its dealings with the all-important matter of land revenue in this province. Our complaint is that the existing settlement machinery is so inadequate, or at any rate performs its work in so inadequate a manner, as to entail year by year the loss of many lakhs of revenue, which might be collected without exciting a murmur of discontent, and without in the least degree interfering with the advancing prosperity of the country. The case may be briefly stated thus. The value of land and of the products of land have beyond all question increased within the last few years at least 25 per cent. In the last Punjab Administration Report the selling price of land is stated to have advanced since 1864-65 from Rs. 5 8 per acre to 10-12; and it is only natural that it should be so. The Punjab, when we annexed it, was a simple bear-garden; we have given it twenty years of peace, order and prosperity; we have replaced the cruel exactions of Sikh rack-renters by a moderate assessment; we have created a vast demand for every form of agricultural supply, and we have provided good thoroughfares in every direction, by which it may be taken to the most profitable market; the very institution of property may be said to be the work of our hands. Land is accordingly worth two or three times as much as it was before British occupation, and now that the Sutledge bridge is completed and the Indus Valley line in course of construction, there is every reason to believe that a few years more may see it again doubled in value. Now of all this rapidly increasing wealth the people, by traditional usage, deeply engrained into their habits and opinions, are perfectly prepared to pay something between a half and two-thirds to the Government to whose protection and management the whole is owing. This payment, whatever we may think of its abstract propriety, is sanctioned by immemorial tradition, and is in entire conformity with the notions of the community at large. They and their fathers before them have borne it, and the worst that we could do would be

but child's play in comparison to the ruthless exactions of their former rulers. No land tax that we could impose would, it may safely be said, provoke half the heart-burnings and disaffection that are called into existence by such unaccustomed impositions as the Income-tax of last year. Under such circumstances we should expect to find the Government in its financial embarrassments taking all reasonable care that the claims of the State to a legitimate fraction of the enhanced agricultural profits of the country should not be overlooked. So far, however, is this from being the case that, while the most minute and elaborate precautions are adopted for ensuring the regularity and exactness of every branch of judicial procedure, the assessment of land-revenue has been allowed to fall into neglect, and the whole Settlement Department to come to something very like a complete break-down. The consequence is that the settlements in progress are ludicrously disproportionate to the work that has to be done; old settlements run on simply because new ones cannot be effected, and meanwhile revenue is being thrown away at a rate which must make both the ears of Sir K. Temple to tingle, if indeed any power of tingling remain to them after all the cruel things which they have listened to of late. There are at present, if we read the statistics aright, no less than 16 districts, aggregating some 60 lakhs of revenue, running on at old rates, simply from want of new settlements. Settlements to the extent of 60 lakhs more at least will expire within the next ten years. The theory, of course, is that except for some special cause, new assessments are imposed when the settlement expires, and that the operations of the Settlement Department in some measure keep pace with the expiry of the old settlements. This is, in fact, however, as far as possible from being the case. "During the year 1869-70," the Administration Report informs us, "settlement operations were in progress in Hazara, Montgomery, Dera Ghazee Khan, Peshawur, and parts of Hoshiarpore and Goodaspore." Now the aggregate revenue of the first four of the above places is about 13 lakhs, and the Omah circle, which contains the parts of the Hoshiarpore and Goodaspore districts referred to, would not, we presume, add very materially to the sum. It appears, accordingly, that with 60 lakhs of expired assessments on hand, and 60 more to expire within the next ten years, the Government only attempts to deal with 13 lakhs, and that in a way which renders it unlikely that even this miserable fraction will be properly reassessed for several years to come. Nor is this all. The prosperous and wealthy districts of Umritsur, Soalkote, and Goodaspore, aggregating 28 lakhs of revenue, Gojranwallah with 4½, Gujrat with 5½, Lahore with 5 and Kangra with 6½, have all it appears been resettled within the last few years, at an expense of over seven lakhs; and, strange to say, with an initial decrease of Rs. 22,582. In the Umritsur Division, even including the canal revenue, the result of the settlement was an immediate decrease of revenue of 18,712 rupees, and though there is a progressive increase which at the end of 15 years will have run the revenue up to 2½ lakhs, it is hardly conceivable that there must not be something extremely faulty in the principle on which the present assessment can be placed at so very reduced an amount. Of this, however, it is difficult to judge, as the final reports of these districts were, when the last revenue statement was made, either "in embryo, or altogether uncommenced." The result of all this appears to us that there are existing assessments in the most recently settled districts, aggregating some 50 lakhs of rupees as to which the Government has had no opportunity of forming an opinion, owing to the failure of the settlement officials to submit a final report, but as to the soundness and propriety of which the very gravest doubts are entertained, inasmuch as instead of bearing some proportion to the increased resources of the country, there is a positive present diminution of the revenue, and a future increase quite incommensurate with the progress of wealth, and the increased value of land and of agricultural produce.

To this subject, however, we hope to return on a future occasion. At present our case simply is thus. There are 50 lakhs of revenue reassessed, and in all probability wrongly, because far too lowly, as to which no report has, we believe, been submitted to Government, and no sanction, therefore, of course received; there are 60 lakhs more running on at old rates after the expiry of settlements; and there are more than 60 more which will require reassessment within the next ten years. Against all this, the Settlement Department had last year 13 lakhs of revenue under Settlement. When we repeat that land has increased 100 per cent. in value within the last five years, and that the general opinion of the district officers is that land revenue might be enhanced throughout the province 25 per cent. on the present rates without appreciably affecting the prosperity of the agriculturist, and without exciting the slightest discontent, our readers will be able to compute for themselves the annual loss of revenue which the present defective machinery of the Settlement Department imposes on the State. The Punjab Government may certainly be richer by a quarter of a million sterling within the next few years, if it only chooses to take the necessary steps; at present it is in the position of a householder too indolent, or too good-natured, to collect his lawful rents.

## (The Pioneer.)

Government is allowing all the additional revenue, that such a state of things brings within its reach, to slip through its fingers merely from its reluctance to place the Settlement Department on a proper footing and oblige it to do its work in a proper way. Here, again, there is to be found in full operation the pernicious commixture of executive and judicial work; not only are the settlement officials very inadequate in number to the amount of work to be done, but they are by a law peculiar to the province saddled with the disposal of the whole of the civil suits in connection with land in any district which happens to be under settlement; the consequence is that new settlements cannot be prepared with at all the same rapidity as the old ones expire. In 1869-70 out of 221 lakhs of revenue, upwards of 60 lakhs of which was collected under expired settlements, only 320,000 are shown in the imperial returns as being under settlement. In the North-West Provinces during the same period, out of a land revenue of 400 lakhs, no less than 50 lakhs were under re-assessment; settlement operations, revision, or re-assessment were in progress in twenty districts; an increase of land revenue for the current year of 26 lakhs had actually been realized and a total increase of 75 lakhs was expected from the settlements in hand. What we would venture to ask is the reason for following in the Punjab a policy so entirely different to that in force in the North-West? Parts of the former province are no doubt unable to bear heavy assessments, but large portions are extremely fertile; our assessments are known to be about half what the Sikhs exacted; social order, the extension of canals, and the recently completed means of rail communication with the rest of India, have given an extraordinary stimulus to agriculture, and we believe that the universal opinion of district officers acquainted with the subject is that in all expired settlements the assessments might be raised at least 25 per cent. without the least risks of distressing the agriculturist, checking progress, or exciting discontent. The continued neglect of so large a source of revenue, when every rupee is of importance, is one of those strange blunders for which no one in particular holds himself responsible, but which are none the less detrimental to the interest of the State. Within the next ten years there will be at least 130 lakhs of land revenue in the Punjab requiring re-assessment; no sort of adequate machinery for this important work exists; if things go on as at present we shall be losing for the whole of that period an annual sum varying between 15 and 20 lakhs, simply from the insufficiency of the Settlement Department to cope with the duties imposed upon it. Nor is this all. Six or seven rich districts have recently been resettled; the assessment proposed but which, we believe, has not yet been sanctioned or even officially reported to Government, is so totally incommensurate with the increased value of land and general prosperity of the province, as to excite the gravest distrust as to the soundness of the principle on which it has proceeded. Strange to say the Punjab Government has allowed the matter to stand over from year to year, as if the realization of 15 or 20 lakhs of revenue, more or less were a matter of secondary importance, which might advantageously be postponed to a more convenient period. We sincerely trust that the committee will dwell with all the emphasis it deserves on this aspect of the Punjab administration, and that they will throw all the weight of their influence into the scale in favor of any alteration, whatever be the incidental expense which may be necessary for placing the executive generally, and the Settlement Department in particular, on a footing of real efficiency.

## RHEA FIBRE. PRIZE—£5,000.

WHILE in charge of the Kangra District some years ago, Major Paske brought to the notice of the local Government that a Mr. Montgomery had established a China-grass plantation on his estate, the Ram Bagh at Kangra. Major Paske seems to have taken great interest in the experiment, foreseeing that if the cultivation extended, and the fibre could but be properly prepared, it would in all likelihood become a staple article of commerce. Want of capital and other difficulties, against which we are told Mr. Montgomery contended with courage and perseverance, at last brought the experiment to a stand-still, and he has since simply cultivated the plant without attempting to extract the fibre. Whatever results may attend the cultivation, to Mr. Montgomery we are assured belongs the credit of having introduced it into India, as his experiments have fully proved that the soil and climate are admirably suited for the cultivation of the plant.

The Government of India at last made inquiries into the culture; and it is now established that the extent of country in India, where the plant can be grown, is practically unlimited.

The only obstacle to an extensive trade in the fibre is the want of machinery for separating it and the bark from the stem, and the fibre from the bark; the cost of effecting the separation by manual labour being too great. What is wanted is some machinery, or process, that will turn out a ton of fibre at a cost of not more than £15 per ton. In order to stimulate invention, the Government of India offers in our advertisement columns a prize of £5,000 for any machine, or process, that will secure this end.

When visiting England in January 1870, Major Paske took with him from the Kangra plantation samples of the fibre in its natural state, in different stages of manufacture, and as dyed by the common bazaar dyes of India. The samples were forwarded to Manchester and Liverpool, and exhibited in the Chamber of Commerce at each place respectively. They were inspected by a large number of persons, and excited considerable interest. In Liverpool, the Chamber resolved that the importance of the article could hardly be exaggerated, and decided to call the attention of the Chambers of Leeds and Belfast to the product, notifying to them the fact that the Indian Government were offering prizes for machinery to prepare it for the market. Major Paske tells us that if the fibre can be delivered in England at £40 to £50 a ton, it will become a most important article of commerce, both as a substitute for cotton and for mixture with cotton or silk in the manufacture of textile fabrics on account of the length, the strength, and the soft silky nature of the filament. The excellence and beauty of the fabrics into which it has been manufactured in England have excited much remark. The requirements of the case—in the terms of the Government advertisement—are, as we have said, some machinery or process capable of producing, with the aid of animal, water, or steam-power, a ton of fibre of a quantity which shall average "in value not less than £50 per ton in the English market, at a total cost, all processes of manufacture and allowance for wear and tear included, of not more than £15 per ton. The processes are to be understood to include all the operations performed, after the cutting and transport of the plant to the place of manufacture, to the completion of the manufacture of fibre of the quality above described, and the machinery must be simple, strong, durable, and cheap, and should be suited for erection at or near the plantations, as the refuse is very useful as manure."

All machinery intended for the trial must be brought by the competitors to the Saharunpore Rhea Plantation before the 1st April 1872, to be there worked under their own supervision, or under that of their representatives, for a sufficient length of time to enable the judges to determine whether the conditions have been complied with. The prize machine is to be transferred, if required, to Government at 5 per cent. above cost price; the patent right to be also transferred, if required, to Government, on the latter securing to the patentee a royalty of 5 per cent on the cost of all machines manufactured under the patent during its currency. "To stimulate invention, the Government offers a prize of £5,000 for the machine that best fulfils the conditions named; and rewards of moderate amount will be given for meritorious inventions, though failing to meet entirely all the conditions named. Owing to the delay that has taken place in maturing these arrangements, the trial is deferred until the 1st April 1872 to afford time for the preparation of machines and their transport to India. Saharunpore has been fixed as the place where the public competition will be held, and where Government will provide steam-power for the machines.

## THE PUNJAB TENANCY ACT.

A MONTH or two ago, we remarked that the Punjab Tenancy Act, concerning which there has been so much heated discussion, appeared to be working in a very satisfactory manner. We founded the remark upon a statement in the Administration Report for 1869-70, to the effect that the tenants who had lost status under the operation of the recent settlements, had been very active in seeking to recover their lost position; while the proprietors had been singularly apathetic in availing them

selves of the provisions of the Act enabling them to evict occupancy tenants on payment of compensation, these provisions being very rarely put in force by them. The conclusion we said was irresistible, that the older settlements were more just, and more in accordance with the convictions of the people than the later ones.

In reply to this statement, we are assured that those who are in daily intercourse with the people know the case to be very different. The Act has been so framed, it is said, and is being so worked, that the proprietors feel they can do nothing more than they have done. "All they know is, that what was done 'injuriously to their interests, the Calcuttawalla Lord Sahib has 'by a new *kanoon* confirmed. The order has gone forth to 'restore former things. Government will not have the question 're-opened, will not hear what they have said, and what is the 'good of going into court, when Government has set its face 'the other way." We are assured that this truly represents what is felt and said in the villages, not by one but by hundreds of all classes. "If the Sirkar does not want it, what is the good of 'going into court. We are totally ignorant of this *kanoon*; it is 'quite unintelligible to us; it does not represent the ground and 'circumstances under which we should bring up our disputes; 'expenses of litigation are great; we don't want to eject any 'body who works well with us; but the Government has 'totally changed the relations that have existed between us and 'those who held land from us as ordinary tenants; and even 'if we did sue, Government would only, through its officers, 'discourage the litigation that would arise; and perhaps we 'might appear as if we were contending against our Govern- 'ment." This we are assured is the real explanation of the silence and seeming apathy of the proprietors. It is of course impossible for us at this distance to pronounce upon the accuracy of either story, but we feel bound to give the opponents of the Act full opportunity to express their views as to its working.

In the following letter, therefore, they will speak for themselves:—

To the Editor of the "Indian Economist."

SIR,—Your issue of 15th December contains a brief notice of this Act, in which you state that it appears to be working satisfactorily and smoothly. You further observe that it is a significant fact that whilst under the Act many tenants have sued to regain the status of which they were deprived during the recent settlement operations, the proprietors as a body have been almost wholly silent. From this you infer that the former settlements were more just and more in accordance with the feelings of the people than the present one. This inference, I think, you will be inclined to modify, if you carefully examine the facts on which it is based. You say the silence of the proprietor is very significant. It is so, but it does not necessarily signify that he is contented; he is silent because he feels himself to be utterly helpless. He believes that the orders of the Government to restore the *mouroossee* tenant to his old impregnable position are absolute and he is supported in this belief by what actually took place in the Punjab. When the Act was first passed, the question arose whether any, or what, correction of the new records was necessary. It was suggested that there was no necessity for any actual alteration; it would be sufficient for any of the old *mouroossee*s, when an attempt was made to eject them, to prove that they had been entered as *mouroossee*s in the former record. It would then be for the proprietor to prove his case under Section 6 of the Act, and the new record would be found very useful evidence at the trial of what the status of the parties really was. But this suggestion was overruled, and it was ordered that a special officer should be deputed to revise the whole of the tenant entries, restoring the *mouroossee*s to their former position in the record. The whole country naturally inferred that they were restored to their former position absolutely. The Punjabi proprietor is not notorious for subtlety of thought, nor is he capable of steering his way with dexterity through the complicated and often contradictory sections of an Act of the Legislature. The Tenancy Act he had probably never seen, unless it may have chanced to be lying on some officer's table. But he did see an officer taking the settlement record of a village (the only literature with which a Punjabi is at all acquainted), and entering in it the restoration of the *mouroossee*. If the officer was benevolent, he might have explained to the proprietor that, although the *mouroossee* was re-instated, yet a suit might be brought to eject him; but whilst this revision was going on, the ordinary courts were forbidden to take up such suits. The only officer competent to try the case, was the very man who had just restored the tenant before the eyes of the proprietor. I have said the

mind of the Punjabi is not subtle: he cannot see the profundity of the policy of putting a man up in order to knock him down, and therefore he does not yet comprehend the benefits which he may secure for himself by instituting a suit under a Code which is a model of "simplicity at the cost of exactly one shilling." As I have already stated, the proprietor is silent, not because he is contented but because he is helpless.

Secondly, as regards the satisfactory working of the Act, are we to conclude that a measure is satisfactory because it is not met by insurrection? If so, the Tenancy Act ~~may~~ fairly deserve the epithet. But I think, Sir, you will agree that for a law to work satisfactorily it is necessary for it to be based on intelligible principles; for its provisions to be so clear that they cannot be misunderstood either by the courts or by the people; and for there to be no difficulty in carrying it out. I do not think the Punjab Tenancy Act fulfils any of these conditions. The attempt at a so-called compromise, is illogical without being fair. Its provisions are so obscure that if you can get half a dozen English officers to discuss them, you will find as many interpretations of almost every section of the Act. Without taking up your space by a lengthy criticism, I will merely mention Section 2 which gives the force of agreements to entries in the old record, and Section 7 which provides that there shall be no right of occupancy in the common land of a puttadari village. Did you ever find two men agree as to the meaning of those sections? I have never done so; and yet Section 2 is of more importance than the whole of the rest of the Act. If then, educated Englishmen who have studied carefully the tenancy question, and have followed every Section of the Act through the debate in Council, cannot understand its provisions, what mischief is likely to ensue when its operation is left to tahsildars, that is to native magistrates who have never studied the subject, and have only made themselves acquainted with the Act through the medium of a bad translation? The result is just what might be expected: the decisions of the subordinate courts all over the country, are full of contradictions and absurdities. I could give you instances where the Court has utterly ignored Section 2; others, where it has considered that it means much more than it does; whilst they have nearly all of them united in ignoring the great distinction made by the Act between the two classes of tenants, viz. those entitled to occupancy rights under Section 5, and those who are entitled to them merely because they were formerly recorded *mouroossee*, and who have a merely modified protection by Section 6. In fact the view of the subordinate courts is (1st) that all *mouroossee*s are restored absolutely to their former status; (2nd), that they are further entitled to the new privileges conferred by the Act; (3rd), that all are entitled equally to privileges which were only intended for a few. You may say if the decision of the lower court is wrong, why does not the man appeal? The answer is, that he does not himself understand the law; that it was with the greatest difficulty he framed his first plaint; even then he did not make himself very intelligible; that the first court was as ignorant as he was, and complicated the matter by a further mass of elaborate nonsense; and that to draw a petition of appeal to upset this judgment is utterly beyond his power. As he does not know the law, he cannot possibly be sure that the lower court judgment is wrong.

The comparative merits of the former and present settlements is a question on which I have no desire to enter. Your opinion on it is merely based on the alleged satisfactory working of the Tenancy Act, and I think I have shewn you that this allegation is scarcely supported by the evidence. In doing so, I have not raised any captious objections or nice points as to which the Act might possibly be misunderstood. I have confined myself to facts that have occurred within my own personal knowledge. I could shew you the record of every case I refer to. I think you will admit the result is scarcely satisfactory.

I have said that the people do not understand the Act. Allow me to remind you that the Secretary of State distinctly ordered that special facilities should be afforded them both of understanding it, and suing under it. I scarcely think the Government have carried out these orders as they were intended to be carried out. Has the Act been translated into Punjabi, the real vernacular of the people? Have Deputy Commissioners taken every opportunity of explaining its provisions to them? On the contrary, a Government circular was issued to the effect that now the Act was passed, officers were to abstain from discussing its provisions! No doubt the intention of this was to prevent agitation against the principles on which the Act was based, but many officers certainly considered that they were forbidden to explain the meaning of any section of the Act, except when a case came before them judicially. As for facilities for instituting suits, I have already said that whilst the revision was going on, the courts were practically closed; and I will add that although they are now open, there is an impression abroad that the Government has "put its foot down" in favor of the tenants, and undoubtedly as yet the people of this province, either from fear or loyalty, abstain from enforcing in the law courts views opposed to those of the

**Executive Government.** To thoroughly carry out the instructions of the Secretary of State, something more appears to me necessary. I would suggest that the local Government should, (1st), have the Act translated carefully into Punjabi and distributed freely amongst the people; (2nd), assign District Officers to take every opportunity of explaining its provisions fairly, not only mentioning the rights of the tenant under it, but also those of the proprietor; (3rd), establish special courts, similar to those lately established in Ireland, which would move freely amongst the people and work the Act on uniform principles. I have no hesitation in saying that the present courts are numerically insufficient, and that if they were doubled they would be incompetent, unless they were controlled by an officer capable of understanding and explaining the Act.—I am, Sir, your obedient servant,

PUNJABI.

### THE SELECT COMMITTEE.

INDIA has at last obtained what it has so long been demanding—a Committee of Enquiry into the management of its finances. We are informed by telegraph, that it was the Premier himself who moved for the enquiry, and that he wished to appoint a joint Committee of the two Houses. Mr. Gladstone we think was right, but the refusal of the Commons to sit in committee with the Lords, has led to a resolution to confine the enquiry to the lower House. The Peers will now take no part therein what ever. We can hardly suppose that this resolution has been come to from mere pique, but it would be difficult to persuade us that the interests of India were consulted in the exclusion of men like Lord Ellenborough, the Marquis of Salisbury, and Lord Northbrook from the conduct of the enquiry, and we yet hope to see the resolution reversed.

The enquiry will naturally take two great lines or directions. The Committee have to pronounce judgment upon—

- (1.)—The skill or incompetency with which the finances of the country have been managed in Calcutta, since the Revolution of 1857.
- (2.)—The justice or otherwise of the nature of our financial relations with England.

In point of fact, two great parties will be put upon their trial before the Committee—(1st) the Government of Calcutta, and (2nd) the Government of England; and this fact should be clearly understood at the outset. We are going, we say, to indict the Supreme Government of India, for the character of its finance these ten years past; and the Supreme Government of England, for the injustice with which it has treated this great dependency in its financial relations therewith. We could not we believe, state more clearly the real purposes for which the Committee is appointed. The Supreme Government of India will have to answer before the Committee for its incessant tampering with the Land Tax; for the policy embodied in the famous maxim that India must not borrow; for its device of an Income Tax and of Export Duties for the construction of our railways; and for the other evidences it has given of financial incompetence. On the other hand, the Supreme Government of England will have to justify and defend the exactions which it has so long been permitted to make upon the Indian Treasury. In this respect, the appointment of the Committee is a ministerial challenge to us to prove our case. The challenge is given, we believe, with perfect sincerity. The question was formally raised for the first time in the House of Commons in 1868, in the course of a debate upon the cost of the Abyssinian war. Nothing could have been more honourable than the general tone of that debate, but it was noticeable chiefly for eliciting from Mr. Gladstone an expression of views strongly adverse to those which we have ever urged. Mr. Gladstone said—"I am inclined very much to share in the feeling—and I think it is a most laudable and honourable feeling—which is entertained by my honorable friend the member for Brighton, and by some other gentlemen in this House, namely, a sentiment of scrupulous and tender regard to the nature of our relations towards India, and to the fact that as we alone have the power in our hands, we are therefore doubly bound to execute it with justice. If my honorable friend shall think fit to move for an enquiry, or if the Government should think fit to propose an enquiry—

"and, for my part, I am very disposed to believe it might be useful—into the distribution of the military and naval charges between England and India under the present arrangements, my opinion, my strong opinion, is that the result of that inquiry would be a not inconsiderable addition to the charge of India, and a not inconsiderable diminution of the charge of England."

Mr. Gladstone is too honest a man to be very consistent, and we are not without hope that the discussion which this statement of his views elicited at the time may have modified them. At any rate, we owe him our acknowledgments for bringing the matter to an issue by the appointment of this Committee. The general nature of our charge against the Government of England is well known. We complain that the tax-payers of that country administer as they please the taxes raised in this country, and that they have ever done so since there was an English Government in India at all. Now the relations between the two countries being infinite in their ramifications, and the maintenance of those relations costly in the extreme, we might reasonably expect to find exactly what we do find—an infinite number of positive misappropriations of Indian revenue on the part of the mother country, and a spirit of selfishness pervading its entire management. Under such conditions, it were absurd to expect anything else. Well, we are challenged to prove the charge, to substantiate it, by giving special instances of the injustice of which we complain. It would be mere affectation to conceal that it is chiefly our own writings—or harping if you please,—upon the subject, that has brought this enquiry about. For the last twelve or thirteen years we have made every effort to familiarize the public mind with the case to which our own attention was first drawn in 1858 by an admirable pamphlet of Sir George Wingate's upon the financial relations between the two countries. The truth is that the general charge admits of no reply. Thus our readers are all familiar by this time with the story of the wrong inflicted upon India by the East India Stock arrangements of 1834. We did not know until lately that the injustice of the course taken by the Ministry of the day, was denounced in strong terms at the time. In July 1833, the *Westminster Reviewers* commented upon it as follows:—

"There are two very exceptionable points of detail in the ministerial arrangement. The first of these is the proposition to give the holders of East India Stock a twenty years' lease of the Government of India \*\*\* The other point refers to the pecuniary terms given to the holders of East India Stock. A dividend of 10½ per cent. has been virtually guaranteed to them in perpetuity, by which (for there is next to nothing received on the other side) a perpetual burthen has been imposed upon the people of India equal to £630,000 per annum, or what is equivalent to increasing by nearly one-third the present territorial debt of India. The rapid and great advance in the value of the Stock, since the promulgation of the Government scheme, and to which there is no parallel in any other public security, is strong and damning proof of the prodigality of the Government project. The holders of East India Stock had by no means so good a claim to a continuation of the dividends which for forty years they have been paying themselves, as the holders of the Navy 5 per cents. had to a continuation of a dividend to that amount. The utmost reach of liberality ought therefore only to have placed them on an equality with the latter, and this, although it would not have raised, would not have depreciated the value of India Stock by the smallest fraction. The dividend, in fact, instead of being 10½ per cent. ought only to have been 8 per cent., and this too only for a term of seven years, at the conclusion of which it ought to have been reduced to 7 per cent. and after a further term of the same length, to 6 per cent. This, while it would have been equivalent to doubling the original Stock of the proprietors, would have produced a saving to the public [India] in the first term of £150,000 per annum; in the second term, of £210,000; and at the third period, when the Indian fund-holder was put upon an equality with the holders of the 3 per cent. Consols, of £270,000. In this manner, without placing the holders of Indian Stock in a worse condition than the holders of any other



'public security, a sum would have been saved far more than "sufficient for carrying on the whole of the Home Administration of India."

Now the Government of England will have to justify this wrong before the Committee of Enquiry, and to shew that India ought still to continue to suffer from it, for after the lapse of nearly forty years it is not ended yet. The very first item in the Home Charges year after year is a demand for £830,000 on account of this Stock. Calculating interest at 5 per cent, India has already paid £90,000,000 (ninety millions) sterling on account of it, and has to pay £12,000,000 more if we are to wait for the Guarantee Fund to redeem it. England is bound, we say, in conscience, to stop this draft upon the industry of India, and without asking us for any further contribution, to make the Stock a part of her own national debt. This is the smallest measure of the redress she can reasonably make. In the same way must the Committee make enquiry into the justice of throwing upon our shoulders the cost—the entire cost—of the Afghan war. These exactions on the one hand, and the financial arrangement of the Government of India on the other, are the great subjects for the determination of the Committee, and our contemporaries will, we trust, keep both steadily in view. If we fail before the Committee, it is not likely that another opportunity will be afforded us; if we succeed, the Indian Treasury will be relieved of several millions sterling a year of charges improperly included in our accounts.

#### THE BALANCE SHEETS OF THE PROVINCES—1861-69.

THE total amount levied under the head of land revenue in the Lower Provinces of Bengal during the eight years ending 30th April 1869, and the total expenditure each year upon the civil administration thereof, and purely local works of improvement therein, were respectively as follows—

Land Revenue £	Civil Administration £	Public Works. £
1861-62..... 4,166,505	4,088,023	755,618
62-63.... 3,907,644	4,326,406	617,490
63-64.... 4,061,551	5,009,469	861,659
64-65.... 3,810,488	5,223,681	811,189
65-66.... 3,820,288	4,721,610	610,207
66-67..... 3,682,825	4,210,488	788,568
67-68..... 3,797,785	5,289,784	916,381
68-69..... 3,965,780	5,181,415	1,170,411
<b>£31,302,400</b>	<b>£38,001,000</b>	<b>£816,531,100</b>

Under this head of civil administration, however, are included many charges of a character purely imperial that ought not to have appeared in these accounts at all. We have gone carefully through the period, and find the following charges treated, year after year, as though they were part of the cost of the local administration of these provinces—

Marine £	Opium £	Political Assignments £	Salt £
1861-62..... 93,267	1,434,481	196,783	446,434
62-63.... 96,218	1,845,080	221,616	240,028
63-64.... 100,938	2,394,336	223,859	..
64-65..... 262,571	2,363,590	228,670	..
65-66..... 255,553	1,891,012	186,024	..
66-67..... 263,214	1,074,263	239,866	..
67-68..... 250,001	1,676,719	226,545	..
68-69..... 243,000	1,904,000	230,000	..

On what principle Bengal is charged with the cost of a marine service which is maintained for the general interests of the Empire, it would be hard to divine; so also with the cost of the manufacture of opium and salt, the revenues from which are imperial. Excluding these charges, amounting in the aggregate to £18,484,000 from the accounts of the Presidency, we find that the local revenues of the period, and the purely local charges compare, as follows—

Land Revenue 1861-69.....	£ 31,302,400
Local Public Works .....	£ 6,531,000
Civil Administration.....	£38,001,000
Less opium, salt, Marine, &c.....	18,484,000
	<b>£19,357,000</b>
	<b>£ 23,046,000</b>
	<b>Balance.. £ 3,689,000</b>

Now this balance represents the contribution which Bengal has made during the period towards the imperial charges of the army, debt, home establishments, &c. To it must be added however a greater or less sum on account of the Salt Tax imposed upon the provinces being somewhat heavier than it is in the rest of India. The duty ought to be made uniform throughout the country.

If we turn to the accounts of the North-West Provinces, or of Madras, or Oudh, and compare them with the accounts of Bengal, we shall see at once how unequal is the pressure of taxation in the country. Take the Oudh accounts first—

Land Revenue £	Civil Charges. £	Public Works. £
1861-62..... 1,070,822	539,396	171,821
62-63..... 1,084,655	568,868	148,891
63-64..... 1,007,329	564,768	120,666
64-65..... 1,004,047	483,450	118,197
65-66..... 1,133,164	485,619	122,297
66-67..... 1,037,894	481,384	196,235
67-68..... 1,210,064	525,542	215,879
68-69..... 1,255,259	551,004	215,166
<b>£8,784,000</b>	<b>£4,215,000</b>	<b>£1,812,000</b>

In this case, the local accounts are comparatively pure, the expenditure upon imperial objects being confined to an outlay of about £140,000 a year for political assignments under treaty improperly included in the civil charges of the province. The amended balance sheet of the eight years under review will stand as follows—

Land Revenue 1861-69.....	£ 8,784,000
Local Public Works.....	£1,812,000
Civil charges.....	£ 4,215,000
Less Treaty assignments 1,120,000	
	<b>£ 3,095,000</b>
	<b>£ 4,407,000</b>
	<b>Balance.....£ 4,387,000</b>

Thus the small province of Oudh, with the great body of its cultivators in a frightful state of indebtedness, and with a population of not more than six or seven millions is mulcted every year by the Imperial Treasury in a sum nearly equivalent to that paid by seven times the number of people in these Lower Provinces. Of course a very great wrong is done to Oudh.

Pursuing the same method impartially with the accounts of the other provinces, we find the results to be equally anomalous and unsatisfactory. The accounts of the North-West Provinces for the period, are as follows—

Land Revenue £	Civil Charges £	Public Works (local) £
1861-62..... 4,615,280	1,872,458	640,491
62-63..... 4,061,287	1,612,424	475,622
63-64..... 4,048,497	1,583,831	561,374
64-65.... 4,086,471	1,593,196	641,725
65-66..... 4,212,491	1,627,193	499,396
66-67..... 3,817,741	1,613,650	741,346
67-68..... 4,084,016	1,767,666	746,939
68-69..... 3,891,958	1,846,322	936,393
<b>£32,887,000</b>	<b>£18,467,000</b>	<b>£5,305,300</b>

In the civil charges of these provinces are included political allowances under treaty to the extent of about £100,000 a year. Striking them out of the accounts as Imperial, and therefore improperly included in the local budget, the balance sheet for the eight years under review stands as follows—

Land Revenue 1861-69.....	£32,887,000
Local Public Works.....	£ 5,305,300
Civil Charges.....	£18,467,000
Less Treaty allowances, improperly included.....	800,000
	<b>£12,667,000</b>
	<b>£17,963,000</b>
	<b>Balance.....£14,925,000</b>

So that fifteen millions sterling of purely local revenue went into the Imperial Treasury during these years as the contribution of the 30 millions of people living in the North-West Provinces, while the 40 millions of Bengal contributed from the same source about one-third only of that amount.

The balance sheet of the Bombay Presidency tested in the same way, has occasioned us a good deal of surprise. It stands thus:

Land Revenue 1861-69	£27,806,000
Local Public Works	£ 9,511,870
Civil Charges	£ 2,744,000
Less property Imperial Charges	9,200,000
	£19,544,000
	£28,055,870

Thus instead of contributing anything from its local revenues to the Imperial Treasury, Bombay would seem to have made a draft thereon for its own purposes to the extent of £1,400,000. We have endeavoured to treat the account with the strictest impartiality, and have therefore excluded from the civil charges of the Presidency the following items as imperial in their character:—

Marine Charges	1861-69	£22,214,000
Political agencies	.....	582,000
Assignments under Treaties	.....	586,000
Interest on Service Funds	.....	745,000

A very onerous item, however, in the civil charges of Bombay, is that which appears every year in the accounts, under the head of "Allowances to district and village officers." The amount varied during the eight years in question from £394,924 in 1861-62 to £282,085 in 1868-69. We have not ventured to deduct this item (amounting in the aggregate to £2,900,000) from the local charges of the Presidency, but the propriety of its appearance there, is open we think to fair question. The charge arose under peculiar circumstances, and it is not by any means clear that Bombay might not fairly claim that it should be regarded as an imperial and not a local charge, and as such included under the head of "Treaty allowances and assignments." In the Proclamation issued by Mr. Elphinstone during the war with the Peishwa in 1818, it was solemnly promised that "all *wuttun* or *inam* lands, established pensions, and annual allowances" enjoyed by the people, should be respected and continued, provided the owners withdrew from the service of Bajee Rao, the collection of whose revenue was in the hands of certain hereditary district and village officers (*wuttundars*). These men in a body forsook the prince upon the appearance of the Proclamation, and claimed the fulfilment of its promises. We have been compelled to substitute our own administrative machinery in their room, while we yet continue to pay them the emoluments of their *wuttuns*, amounting to the very large sum we have pointed out. The circumstances under which Mr. Elphinstone's Proclamation was issued, make the annual recurrence of this charge, we think, more properly an imperial than local liability. When that manifesto was issued, the power of Bajee Rao the Peishwa, was yet unbroken; while its assurances and the reputation of our Government for scrupulous adherence to its engagements, were the most powerful causes which contributed to his ruin. It is hard to say whether the Maharrattas or our own Government attached more importance to the appearance of that manifesto. It was carefully timed upon the fall of Scindara, up to which date the pursuit of the Peishwa had been "productive" nothing important, if we except the moral effect of holding him up as a fugitive to the eyes of the country. The repulse at Kirkee and the stand of the Grenadiers at Korygaon, were all the successes of the campaign; and the historian of the war (Grant Duff) distinctly affirms that in the various skirmishes which ensued, no advantageous result had been gained by either party. The truth is, we fought Bajee Rao first with the Proclamation and then with the Sattara family, which most opportunely fell into our hands some ten days after its appearance. The assurances of the Proclamation, and the reinstatement of the Rajah of Sattara, ruined the Peishwa.

Now under these circumstances it is not fair, we think, to Bombay to treat the charge as a liability of the local treasury. It is part of the price paid by the Empire for the overthrow of a ruler that had become a curse to its own subjects and full of danger to ourselves. The same proclamation, it will be observed, guaranteed the *inam* or rent free lands of the Deccan to their

owners, and the same course of reasoning would apply here also. Bombay lost the power of imposing a fair rent charge upon a very considerable proportion of its land under this proclamation; and in decentralising the finances of the Empire, it would be necessary to bear in mind that this forfeiture was incurred for strictly imperial purposes. Once more, a somewhat large proportion of the expenditure of late years upon Public Works in the Western Presidency may fairly be regarded as imperial in its objects. The truth is that the Bombay balance sheet is a very intricate affair, and would require careful and exhaustive treatment to present it in a perfectly fair light in this comparison.

We pass on to Madras, where no such disturbing elements exist to perplex us, and find the balance sheet of the Presidency stand thus:—

Land Revenue, 1861-69	£32,846,000
Public Works (local)	£ 6,198,000
Civil Charges	£20,145,000
Less charges properly Imperial	3,544,000
	£16,601,000
	£22,794,000

Contribution to Imperial Treasury... £10,052,000

The only items we have deducted from the civil charges in this case are £2,894,000, the aggregate amount paid during the period under the head of "treaty assignments;" and £650,000 interest on service funds; both charges purely imperial in their nature. The accounts of the Punjab and of the Central Provinces for the same period, are respectively as follows:—

#### Punjab Accounts 1861-1869.

Land Revenue	£15,180,406
Public Works (local)	£5,186,000
Civil Charges	£ 9,475,000
Less charges properly Imperial	£ 960,000
	£ 8,515,000
	£13,653,000

Contribution to Imperial Treasury £ 1,527,406

#### Central Provinces 1861-69

Land Revenue	£ 4,280,000
Public Works (local)	£ 2,289,000
Civil Charges	£ 4,284,000
Less charges properly Imperial	£ 720,000
	£ 3,564,000
	£ 5,808,000

Drawn from Imperial Treasury £ 1,513,000

We have striven to make these accounts up with the strictest impartiality. Burmah, owing to its capitation tax and the heavy export duty upon rice, we have excluded from the comparison. Pending also a more exhaustive treatment of the Bombay accounts, we think it best to exclude them also. The accounts of the other provinces are comparatively simple, and observe what they reveal. The Central Provinces contribute nothing what ever to the Imperial Treasury, but make a heavy draft thereon year by year: Bengal almost nothing, when we bear in mind its natural resources and its population; the Punjab a very small amount in comparison with what it ought to pay, while Madras, the North West Provinces, and Oudh, between them, keep the empire solvent. In one view, the case stand thus:—

Population.	Contributions in 5 years.	Per head.
	£	s. d.
Bengal .....	5,154,000	2-8
Punjab .....	1,527,000	1-0
Oudh .....	4,327,000	13-4
Madras.....	10,052,000	7-8
N.W. Provinces.....	14,926,000	10-0
Central Provinces.....	1,508,000	(deficit)

It is impossible that figures should more clearly shew the ruinous mistake that has been made in the Central Provinces; a mistake, moreover, which we have pledged ourselves not to change for 30 years to come. Had the finances of the country been decentralised ten years ago, the impossibility of such a settlement would have been seen even by Sir Richard Temple himself.

## AMERICAN FINANCE—DECENTRALIZATION.

Tax national income of the United States is derived mainly from two sources.—(1st) Customs Duties; and (2nd) Indirect taxes upon property, manufactures, and raw produce, the whole of the latter being classed together under the name of Internal Revenue. The estimated income for the fiscal year ending 30th June next, is \$93,000,000 dollars, made up in the following way:—

Customs ... ..	185,000,000 dollars.
Internal Revenue ... ..	175,000,000 "
Land Sales ... ..	5,000,000 "
Miscellaneous ... ..	28,000,000 "

The following official statement in detail of the *Internal Revenue* of the year, with its equivalents in pounds sterling—for which we are indebted to the *Economist*—is of special interest to us in India, on grounds which we shall point out presently:—

	dols.	£	per cent.
Spirits.....	55,591,599	10,189,960	30-00
Tobacco .....	31,350,707	5,747,629	16-92
Fermented liquors ..	6,319,126	1,158,506	9-41
Banks and bankers...	4,419,311	810,317	2-38
Gross receipts.....	6,894,799	1,264,046	3-72
Sales.....	8,887,394	1,620,188	4-77
Special taxes not otherwise enumerated .....	9,620,960	1,763,842	5-19
Income .....	87,775,878	6,925,576	20-39
Legacies .....	1,672,582	306,640	-90
Successions .....	1,419,242	260,216	-76
Billiard table, carriages, plate, and watches .....	907,442	166,896	48
Passports .....	22,756	4,172	-01
Gas .....	2,318,417	424,126	1-24
Other sources.....	728,105	133,486	-89
Penalties, &c.....	827,904	151,781	-44
Stamps.....	16,544,043	3,083,074	8-93
	185,235,867	33,959,909	100-00

It will be seen that 50 per cent. of this vast sum of £34,000,000 is derived from spirits, tobacco, and fermented liquors, or what we call excise duties. Now Indian financiers declare it impossible to obtain a revenue here from tobacco at all, although it is in almost universal consumption by the people. It cannot be taxed, we are told, because it grows at every man's door. It grows in the very same way in America, and yet they do contrive somehow or other to obtain there a revenue of nearly £6,000,000 a year from it. Again, we find the American excise upon spirits and fermented liquors producing between eleven and twelve millions sterling a year, while our own abakree levied upon a population four times as numerous (and including the excise on opium) yields little more than £2,000,000 sterling. And yet we are all agreed that to tax opium, tobacco, and spirits up to the highest productive limit, is required by sound economy and good morality. The American Government obtains an income of £17,000,000 sterling a year from its excise upon these three articles from a people 38,000,000 in number, while we in India get but £2,000,000 from a population four times as numerous. That our abakree revenue admits of almost indefinite increase, we entertain no doubt whatever, the consumption of opium, or spirits, being all but universal in many parts of the country.

Of the remaining \$16,000,000 of this Internal Revenue of America, \$3,000,000 were obtained from stamps, and \$7,000,000 from an Income Tax of one shilling in the pound. So hateful, however, is the Income Tax found to be, that all parties have determined to abolish it, and it will be materially reduced in the budget of the present year, as a step to its final abandonment. The admirers of this tax will thus be deprived at last of their stock illustration of its success. The American Income Tax does not descend so low as the English one, while the attempt to levy it in a country like this, where there are no assessable incomes to tax, will we trust if once abandoned never be repeated.

We have frequently stated our belief that our financial administration should be recast upon the American model. By the Constitution of the United States, Congress is empowered to levy

and collect taxes, duties, imports, and "excises for the common defence and general welfare of the States." It is specially enacted, however, that all such duties shall be uniform throughout the States. Now this great but simple principle should be adopted in India. As we have frequently pointed out before, taxes that are equal in their pressure throughout the country are marked out, by that very fact, as imperial in their nature, and should be treated as such. Such already are the import and export duties of the country, and such ~~are~~ should be the excise duties upon opium, salt, abakree, &c. We may federalize, or decentralize, our finances upon the American model we believe with ease, and with nothing but advantage to the country. The key to the American system, which is simplicity itself, may be found in Sections VIII and X. of the Constitution, and Article X. of the amendments thereto. We shall do a public service, we believe, by producing them in our columns for the study of our financiers.

The sections or such part of them rather as it is necessary to quote here are as follows:—

Section VIII.—Congress shall have power—

I.—To lay and collect taxes, duties, imports, and excises, to pay the debts and provide for the common defence and general welfare of the United States; but all duties, imports and excises shall be uniform throughout the United States.

We have here a very simple but comprehensive and exact statement of the purposes for which the Imperial Government exists at Washington and our own at Calcutta—(1st) "to pay the debts" and (2nd) "to provide for the common defence and general (as opposed to local) welfare of the States." The purposes for which the Imperial Government exists being the common defence and general welfare, it follows, as a logical sequence and just requirement, that the taxes levied for the attainment of these purposes shall be "uniform throughout the country." The Section proceeds to detail with precision, the obligations which fall upon the Imperial Government, under the general terms used in the preamble we have quoted. Having defined the obligations and powers of the Imperial Executive with the utmost simplicity and exactness, the independent powers of the several States are defined negatively with a skill which it is impossible to admire too much. The Constitution was adopted in 1787, and in 1791 Congress, in their first session, proposed and ratified certain amendments, the practical skill of which was probably never surpassed. The tenth amendment was this—

Article X.—The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

We have here again the hand of a master workman. No attempt is made jealously to define the powers conferred upon the local Governments. It is the local States which confer power upon the Imperial Government; and all they have not conferred, they are to be understood to have retained. We have here the natural order of things as opposed to the interested devices of power; and the result of all is—the United States. Everything belongs to the local powers except that which had been conferred upon the Imperial Government for the common defence and welfare of all. The Constitution defines with utmost exactness the responsibilities of the Supreme Government and confers full powers upon it for their discharge and then declares all else to be of purely local obligation. Now, what we want in India is decentralization of this order. It will be as well perhaps for us to shew with more fulness the model we propose for imitation.

THE powers and prerogatives conferred by the Constitution of the United States upon the Imperial Legislature at Washington, and the powers reserved by the Constitution to the local States, are, we say, worthy of careful study in India, where the great problem of decentralization has to be worked out by ourselves. We approach the question in India under very different circumstances from those in which the Constitution of the United States was framed. There power was to be conferred by the people upon a great Central Executive which had to be created for the common defence and general welfare of the

country. Here on the other hand, the problem is how a great central Executive, that has hitherto engrossed all power in its hands may share those duties and functions which it is impossible for it to discharge efficiently. The Supreme Government is anxious to be relieved of the responsibilities imposed on it, and the Provinces are impatient to assume them. There is no unwillingness we believe to part with authority on the part of the Supreme Council; on the contrary, there is a sincere desire to be relieved of responsibilities which it is seen ought never to have been imposed upon it, and which embarrass and impede it in the discharge of its own proper duties. In these circumstances, the question is simply one of practical statesmanship, and it may help us to arrive at valuable conclusions if we can define with accuracy the purposes for which an Imperial Executive really exists in India. The most ardent believer in decentralisation will hardly, we think, go the length of Mr. Bright's recommendation that we should abolish the Governor-General altogether, and divide the country into a dozen independent autonomies owning but one common superior in the Secretary of State. We believe it to be necessary that the Imperial Government should be absolute within the sphere of its own proper responsibilities; and those responsibilities seem to us to be all but identical with those of the Imperial Legislature at Washington. By Section VIII. of the Constitution of the States, its powers are declared to be as follows:—

Congress shall have power—

- 1.—To lay and collect taxes, duties, imposts and excises, to pay the debt and provide for the common defence and general welfare of the United States; but all duties, imposts, and excises shall be uniform throughout the United States;
- 2.—To borrow money on the credit of the United States;
- 3.—To regulate commerce with foreign nations, and among the several States, and with the Indian tribes;
- 4.—To establish a uniform rule of naturalization, and uniform laws on the subject of bankruptcies throughout the United States;
- 5.—To coin money, regulate the value thereof, and of foreign coin, and fix the standard of weights and measures;
- 6.—To provide for the punishment of counterfeiting the securities and current coin of the United States;
- 7.—To establish post-offices and post-roads;
- 8.—To promote the progress of science and useful arts, by securing for limited times, to authors and inventors the exclusive right to their respective writings and discoveries;
- 9.—To constitute tribunals inferior to the Supreme Court;
- 10.—To define and punish piracies and felonies committed on the high seas, and offences against the law of nations;
- 11.—To declare war, grant letters of marque and reprisal, and make rules concerning captures on land and water;
- 12.—To raise and support armies; but no appropriation of money to that use shall be for a longer term than two years;
- 13.—To provide and maintain a navy;
- 14.—To make rules for the Government and regulation of the land and naval forces;
- 15.—To provide for calling forth the militia to execute the laws of the Union, suppress insurrection, and repel invasions;
- 16.—To provide for organizing, arming and disciplining militia, and for governing such part of them as may be employed in the services of the United States, reserving to the States respectively the appointment of the officers, and the authority of training the militia according to the discipline prescribed by the Congress;
- 17.—To exercise exclusive legislation in all cases whatsoever over such district (not exceeding ten miles square) as may by cession of particular States, and the acceptance of Congress, become the seat of the United Government of the States, and to exercise like authority over all places purchased by the consent of the legislature of the State in which the same shall be, for the erection of forts, magazines, arsenals, dockyards and other needful buildings, and:
- 18.—To make all laws which shall be necessary and proper for carrying into execution the foregoing powers, and all other powers vested by this Constitution in the Government of the United States, or in any department or officer thereof.

Section 10 of the same Article further defines the powers of the Imperial Executive, by the limits which it assigns to those of the several States, and the prohibitions under which it lays them.

- 1.—No State shall enter into any treaty, alliance, or confederation; grant letters of marque and reprisal; coin money, emit bills of credit; or anything but gold and silver coin a tender in payment of debts; pass any bill of expropriation, except for the law, or law imposing the collection of imposts, or grant any title of nobility.

2.—No State shall, without the consent of the Congress, lay any imposts or duties on imports or exports, except what may be absolutely necessary for executing its inspection laws; and the net proceeds of all duties and imposts, laid by any State on imports or exports, shall be for the use of the Treasury of the United States; and all such laws shall be subject to the revision and control of the Congress.

3.—No State shall, without the consent of the Congress, lay any duty of tonnage, keep troops or ships of war in time of peace, enter into any agreement or compact with another State, or with a foreign power, or engage in war, unless actually invaded, or in such imminent danger as will not admit of delay.

To the Constitution thus originally framed, a very striking addition was made by the first Congress assembled under it. This addition consists of certain provisions known as the Amendments ratified by the States on the 11th of December 1791, of which the two necessary to be quoted for our purpose are as follows:—

Article IX.—The enumeration in the Constitution of certain rights shall not be construed to deny or disparage others retained by the people.

Article X.—The powers not delegated to the United States by the Constitution, nor prohibited by it to the States are reserved to the States respectively, or to the people.

Now it seems to us, that a careful study of these provisions would help us much in India to a solution of the great political problem we have to work out. Let us try to agree amongst ourselves, and to come to an understanding with the Supreme Government, as to what are the proper powers and prerogatives of the Supreme Executive. We doubt if there will be found any wide diversity of opinion at bottom, as to what they really are. The absolute control of the Army and Marine, the Mint, the Post Office, the Imperial lines of Railway and Telegraph, relations with the Native States and with the Home and Foreign Governments, the right to all existing taxes of uniform incidence in the country, and to impose further taxes if necessary under the same conditions will probably exhaust the list. The freedom of the provinces means also the freedom of the Imperial Government to discharge its own proper Imperial duties.

#### DECENTRALIZATION IN A FORGOTTEN LIGHT.

MR. BRIGHT's proposal of 1858 was that instead of a Governor General and an Indian Empire we should have neither the one nor the other, but so many independent presidencies perfectly equal in rank and power. He would treat each Presidency as if it were the only portion of India belonging to us. Its finance, its taxation, its justice, and its Police Departments, as well as its Public Works and Military Departments would be treated precisely as if it were a State having no connection whatever with any other part of India. Instead of an Indian Empire, Mr. Bright would have so many separate dependencies of the Crown, each in direct correspondence with the Secretary of State for India. The advantages which he thinks would spring from this revolution appear to resolve themselves into—(1st) the belief that the independence of the provinces would lead to "a constant rivalry for good" between them, and that (2nd) we should have no Governor so great that they could not control him in England. "You would have in every Presidency a constant rivalry for good. The Governor of Madras, when his term of office expired, would be delighted to show that the people of that Presidency were contented, that the whole Presidency was advancing in civilization, that roads and all manner of useful public works were extending, that industry was becoming more and more a habit of the people, and that the exports and imports were constantly increasing. The Governors of Bombay and the rest of the Presidencies would be animated by the same spirit, and so you would have all over India, as I have said, rivalry for good; you would have placed a check on that malignant spirit of ambition which has worked so much evil; you would have no Governor so great that you could not control him, none who might make war when he pleased; war and annexation would be greatly checked, if not entirely prevented; and I do in my conscience believe you would have laid the foundation for a better and more permanent form of government."

"ment for India than has ever obtained since it came under the rule of England."

Mr. Bright did not see that the revolution which he proposed would simply transfer the seat of Empire from India to London. His proposal would not put an end to the Empire; it would simply transfer its seat from Calcutta to London. But if there is one question upon which we are better agreed than another, it is probably this, that India to be wisely governed must be governed in India itself, and not in England. The less interference we have from England, the better. We go all lengths with Mr. Bright in his denunciation of the evils of the present centralized system; we differ only as to the remedy, which we hold to be federation, not independence. The Empire must still exist, and its seat still be here, and not in London. What must cease is the attempt of the Imperial Government to engross and to discharge what are purely local responsibilities, and can only be discharged by local administrations. The service which Mr. Bright has rendered is that he has made the continuance of the present system impossible by his vigorous exposure of its absurdity. "Has it ever happened before" he says, "that any one man governed twenty nations, speaking twenty different languages, and bound them together in one great and compact Empire? Look at the making of the laws for twenty nations speaking twenty languages. Look at the regulations of the police for twenty nations speaking twenty languages. Look at the question of public works as it affects twenty nations speaking twenty languages, where there is no municipal power and no combinations of any kind such as facilitate the construction of public works in this country. Inevitably all those duties that devolve on every good government must be neglected by the Governor-General of India, however wise, capable, and honest he may be in the performance of his duties, because the duties laid upon him are such as no man now living, or who ever lived, can or could properly sustain."

Every one feels that reply to this statement is impossible. It only remains that we agree as to the remedy. The remedy which Mr. Bright proposes is that of breaking the Empire up into half a dozen distinct and separate States, completely independent of each other, and simply owning a common allegiance to a power distant half the globe from us. The remedy is proposed in forgetfulness of half the conditions of our existence here. His passionate conception of the reform needed in one direction, has blinded him to the necessity of our simultaneously moving in another and opposite one. *The Empire has yet to be organized in its Imperial character and functions.* We are strangely slow to understand that, whether we will or no, we are the paramount Power in India, and that duties and responsibilities devolve upon us as such, of which we cannot divest ourselves if we would. To adopt Mr. Bright's proposal would be deliberately to abdicate and refuse the position which the course of events has thrust upon us, and from which we can retire only by abandoning the country to anarchy and chaos. Whether we open our eyes to it or not, the so-called Native States of India have already become integral parts of the Queen's Empire of India. Conceal the fact from him in any convenient way we like, it is useless to do so from ourselves that even the Nizam has passed from the position of an independent prince into that of a feudatory of the Empire, and that whatever we may have desired or intended, his independence as a ruler is limited by responsibilities which belong to us and of which we cannot divest ourselves. Without forcing the development of things, we are bound to recognize their tendency. A few months ago, we put into Lord Mayo's mouth words which embodied what our own convictions upon the subject have long been. We made Lord Mayo say:—

"As Her Majesty's representative for a few years in this land, I feel how hopeless it is, overlaid and burdened as I am, that I should be anything to the people of our own provinces, or to the Native princes of India than a mere name, and possibly a wrong-doer where I mean and hope to do right. Would it not be enough that we should undertake to do here in Calcutta for the Empire what is under-

taken in Washington for the United States? The Imperial work of this Government,—the work of holding the Empire into a sympathizing whole, beating with one heart—an empire of which our own provinces and the Native States form the members, as yet lies wholly neglected. Our provinces are all but in rebellion at our minute interference with their affairs, while the Native States lie outside the empire, thorns of the empire altogether, and know nothing of our beloved Queen, but the grasp laid upon the country by our army. Gentlemen, the Native princes of India have yet to be conquered, but in a higher and nobler sense than that of material force. Do we not antedate the time when good government, not necessarily uniform in detail, but marked by healthy diversities of independent growth—shall prevail all over the country, the Native princes emulating our own governments in efforts for the happiness of the people? How grand is the future which this prospect opens, but to realize it how plainly is it indispensable that freedom should be given to all. Freedom in the first place, to ourselves to do our own proper imperial work; freedom in the second to every local government to discharge its own responsibilities, without interference from ourselves."

The policy shadowed forth in this passage expresses a higher and truer statesmanship, we believe, than Mr. Bright's remedy. We see what Mr. Bright does not see—that an Empire already exists here, and while Mr. Bright would break it in pieces, we would bind its members more closely together, giving them, however, the complete liberty for which he pleads. The revolution to be accomplished is two-fold—(1) to *divest* the Supreme Government of powers improperly assumed by it; (2) to *invest* it with those responsibilities of empire which, as Paramount Power, devolve upon it, and which it is reluctant to assume. Take in illustration, the late deplorable famine in the Native States of Rajpootana. Every part of the Empire looked to us, and rightly looked to us, to save the famine-stricken tract from the last extremity of death. Instead of accepting the responsibility, and discharging it, and setting aside the Native Executive altogether if necessary, we allowed a million of people to perish whom we might undoubtedly have saved alive, and whom it was our duty to save alive. In all this agitation for decentralization, there is at present complete oversight of the fact that it is as much demanded in the interests of the Empire which yet has to be created, as of the Provinces which demand to be set free.

#### BURMAH WASTE LAND RULES.

To the Editor of the "Indian Economist."

SIR,—I regret to find that Burmah never finds a word said for it in your columns. You will confer an everlasting blessing on this country, if you will endeavour to help Burmah out of the difficulties which will surely show themselves hereafter, 50 years hence perhaps, owing to the land settlement system and the deplored introduction of Lord Canning's rules for the grants of waste lands in to the provinces. Let me deal with the last subject first.

Would you believe, although we have had the province but 18 years, we have been granting away valuable lands of the country to speculators free for 64, 32, 16, and 8 years. 30,000 acres round Rangoon alone are gone. The people ask, and ask naturally, what has become of the Queen's Proclamation, and is Lord Canning's promise a myth? The Queen told the people she would not interfere with their peculiar ancient rights. Lord Canning said those rights should be scrupulously regarded and not ignored. Have we kept faith with the people? Have we carried out the wishes of our Queen and her representative? No, we have not. We are fast depriving the inhabitants of their rights; that portion of the inhabitants too who chiefly assist in swelling the revenue of this beautiful country, while we are filling the pockets of speculators, at the cost of the people, with money collected from them, by tyrannical agents, for grazing ground, firewood, and even the thatch used to cover their little homes. The Queen and her representative gave clear mandates: but the influence of a few grasping speculators has upset their well considered and just orders. The lands of the country, undeveloped—aye, and unknown to more than three-fourths of the officers of the Burmah Commission—are granted away to speculators; officers of the service included. Men in all positions rush for a slice. The poor peasants look on and say, "Is this the result of British rule? Are we



to be directed at once against them. Told to pay for the produce of our own country. They own from time immemorial, but now they have to pay for the great Queen of England in compensation of her services—services which we were told would be fully repaid up to us.

Burmah, undeveloped, its mineral sources unknown, made over to the hands of a race of speculators. Is this fair? Our railways have yet to be made (to refuse to make them now is only false economy); the lines will have to pass through private grounds, and thousands of pounds will be demanded as compensation where so many pence have not been spent.

As an influential journal, I pray you to use your power to save the country from falling into the hands of speculators. In the event of war, and the Government of British Burmah being put on its resources, where will it look for help? It is fast alienating the people from us, by invasion of their ancient rights—rights beloved by the people, guaranteed by the Queen, but ignored by the local Government. What right have we to grant away the lands of the country for 64 years to any body? Waste lands indeed! The cultivator went formerly to what we are pleased to term waste lands, for the supply of all his household wants: firewood, wild vegetables, and fruits; water, thatch, house materials, &c. They have been guaranteed as his property by the Queen, but now an exacting speculator has obtained in many places the whole of this waste land by the mere asking, and charges the people for these commodities. It makes one mad to think that officers could so recklessly give away the property of others, with an amount of nonchalance, which, were it not for the injury it causes to the people, would be laughable. A stroke of the pen in favor of friendly applicants, and away pass the guaranteed rights of the people for ever! Mr. Editor, I know this country well, and I knew the former Chief Commissioner to some extent; he knew the people; would that he were here now to rectify wrongs they are subjected to.

Many officers high in the Commission have, it seems to me, strange views about the rights of the people to the land. Let Lord Mayo satisfy himself as to the working of these grants, in Rangoon particularly; but do not let him be influenced by the reports of the officers who granted away the lands in the first instance, or by reports of an apologetic nature, they may send in. I will not occupy more of your space by commenting on the settlement system. As you remark in your article as to Bengal, in your paper of the 16th October, the people do not want the new settlements; but when, as suggested for this country, a village settlement is proposed, and, strange to say, reported favorably on by some officers, you will not be surprised to hear that the people are strongly opposed to it; and where village settlements have been made, it has not been with the willing concurrence of every member of the community. Common sense should tell one that such a system, where one man's pocket is affected by the dilatoriness of his neighbour, could never be received favourably.

I believe there is now a settlement officer in Rangoon who shows some respect for the rights of the people, knows the disaffection caused by the introduction of the village system, and has matured a plan which will be acceptable to the cultivators. Trusting I have not occupied too much of your space.—I am, Sir, yours faithfully,

Burmah, Nov. 1870.

AN ENGLISHMAN.

### EDITORIAL NOTES.

It was our sincere and strong desire that the budget statement would be such as to permit us to speak in its praise—but it is impossible. Sir Richard Temple has lost the finest opportunity Minister ever had of earning the reputation of a statesman. With the House of Commons in Committee upon the great subject he was handling, he stands up in the Council with a long string of figures in his hands, and without touching—literally without touching—a single great principle of finance, or glancing at a single economic fact in the condition of the country, tells off his account with the complacent assurance of a butler hand. His accounts to his master in the belief that the totals are all right. Sir Richard Temple is in the wrong place altogether. It is clear that he would make an admirable assistant to the Finance Minister, to relieve him of the drudgery of the work; but he is about as fit to be Finance Minister himself, as one of the clerks in his office. In memory of the fact that a Committee of the House of Commons is at this moment reviewing the whole conduct of Indian finance since the Mutiny, the string of figures put forward by the Minister as his exposition of the subject, can excite nothing but laughter. In the name of Cæcæny let Sir Richard get into some other line: as to criticizing the budget—it is too ridiculous. Let us give it all the praise we can. The figures are all right then

we think, and there has been no speculation so far as we can see, Sir Richard has accounted for every thing to the last pie.

We suggest that some most competent member of Council should give an exposition of Government views upon the subject when the budget comes on for debate. The Finance Minister simply humiliates us all.

TAKE in illustration of our complaint against the budget, the economic fact that there seems to be a total stoppage of bullion imports into the country. The whole amount delivered for coinage at the Mints during the six months ending 31st December last was—

Calcutta Mint....	By Government ....	Rs. 1,16,000	
	„ Merchants .....	„ 7,00,000	
			Rs. 9,04,000
Bombay Mint....	By Government ....	Rs. 1,02,000	
	„ Merchants .....	„ 5,00,000	
			Rs. 7,32,000
	Total....		16,36,000

Or about £160,000, where for 20 years past it has been millions. But a flow of bullion into India is the normal condition of things, and its suspension unnatural, and when prolonged, indicative of mortal sickness in the country. Our economic condition is such that normally we ought to import, year by year, a fourth of the total bullion yield of the world. The matter is of the gravest possible importance, and would fill the Finance Minister with alarm if he saw its significance.

We remember very well Lord Mayo's able exposition of the economic condition of Ireland in the House of Commons a few years ago, and we want an exposition of the same order now concerning India in presence of this Committee of enquiry—showing how the measures, changes, reforms, trade, legislation, and wars of the last ten years have affected us—and what the condition of our times suggests and requires.

THE Madras Railway has been completed to Raichore. The first train entered the Raichore station on the 25th ultimo. The Bombay line is to be ready by the 1st April, when there will be through communication between Madras and the Western Capital, with the exception of the passage of the Kistna, to bridge which will take three years.

A HOME journal says, that “the decentralizing Resolution bears evidence of being an honestly conceived arrangement.”

We think so too, and are surprised at the amount of carping with which the measure has been received. When we remember how slow men are to divest themselves of power, and with what speciousness the determination not to yield it is defended, Lord Mayo's Government deserves, it seems to us, nothing but commendation for a resolution which, in the eyes of two-thirds of our contemporaries, is merely one of those “gifts of the gods” of which it is necessary to beware. The spirit in which the Resolution was conceived has been misread.

A CORRESPONDENT writes to us from the Punjab:—“If you wish to increase the land revenue in a really perceptible way, take up as a subject to be perpetually brought before the public and driven into Government the fact that the best, cheapest, and quickest way in which production can be increased is by irrigation. It is not by periodical revisions of short settlements in a country where holdings average 4 acres to a tenant, and say 16 acres to a proprietor, and famines are constantly recurring, that we can hope greatly to increase the income of the State from land; but afford facilities for enhancing production by irrigation, and (I say advisedly) we can double the revenue in 10 years. It is this that we should not leave undone. What we need is a complete separation of the Executive from all judicial duties, that our officers may be always about, mixing with the people and arranging the concerns of the great *feud*, and finding out how the State landlord may improve the country and strengthen the administration. At last we are to have the latter. There is a committee now sitting here to carry this out. As regards the first little is being done. What enormous expenditure! What little



the "economists" and not to a just representation of its ideas from one family to another. It is difficult, for us we cannot understand the "economists" and attempting in the queer manner in which they are wrapped up and smothered by the "economists" to see the principle of their being recognized. The "very leading principles" which our contemporary "economists" in common property are not properly "principles" at all, but simply practical conclusions based upon the obvious fact that taxes of Imperial incidence belong to the Imperial Treasury, and taxes of Local incidence to the local treasuries. All taxes which are uniform in their weight throughout the Empire belong, we say, to the Imperial Treasury: all taxes of unequal weight, and that cannot be equalized, such as the land tax, to the local treasury. We have shewn elsewhere, at length, how this principle it is that controls American finance, and the suggestion that it should be adopted for our guidance in India is not, we beg to say, common property until its source has been acknowledged by our contemporary.

THE same journal is greatly alarmed, we see, lest the "economists" whose spirit, we are told, "was legitimately stirred up against the waste of land revenue in Bengal and the Central Provinces, should persuade the Bombay Government" that the "land of that Presidency is not half taxed." These "economists" disregard it seems, "certain off-sets which are too palpable to need repetition." But after all, "the main argument against them is one of public policy which cannot be overlooked by a Government which wants to set its house in order upon a sound basis." It is not clear whether it is the house or the furniture that has to be set upon its legs; but we suppose it is the house, as the writer proceeds to warn us that "to strain the main foundation of our financial system to the verge of failure, or even serious fluctuation, would be national ruin." From this jungle of tangled metaphor, the meaning—or what we presume to be the meaning—at last emerges in the following shape:—"As regards self-interest, the ryot now compares his present state with that under the former *raj*; but if our policy of light but certain pressure on the land shall now be reversed, his points of comparison will be the existing rates with those newly introduced. Then to which side will the balance of his contentment with British rule incline?"

It is impossible to do more than guess at the meaning, but it seems to be that an enhancement of the land tax will make the ryot less contented than he now is, and that consequently public policy teaches us to keep both the assessment and the ryot as they are. We breathe freely once more, and are glad to be assured that this is the main argument against the doctrines of the "economists." Let us not holloa however, until we are out of the wood. There is another argument, it seems, of great weight; "and that is that in case of the prolonged crisis of an English war, and ruin to trade, the land is really at present the only remedy for a temporary and severe emergency. In such a crisis we cannot attempt new courses in vague hope of their leading to secure havens. But now it would be most culpable not to carry on that unpleasant, but necessary work of induction and of splitting up the one resource into many (notwithstanding that the many are mainly failures), in order that the many may be reconstructed into 'the one' on a more solid and firm basis. We have never sounded the depths of Indian taxation, nor followed its eddies and byways."

We are fairly gravelled at last. We suppose there is a meaning, but it is too deep for the "economists." The columns of unintelligible writing with which the *Times of India* afflicts its readers is one of the most curious phenomena of the Indian press. The Bombay assessments will have to be doubled and trebled as the leases fall in, if the Presidency is to pay its way.

## THE NEW DEPARTMENT.

### STATE VIEWS.

#### *General Principles laid down by the Governor-General in Council.*

I. For many generations to come, the progress of India in wealth and in civilisation must depend on her progress in agriculture. Agricultural products constitute the most important part of our exports; and the future development of Indian commerce will mainly depend on improvement in the quantity and quality of existing agricultural staple, or on the introduction of new products as materials for manufactures, and for use in the industrial arts.

II. Speaking generally, it cannot be denied that Indian agriculture is in a primitive and backward condition, and the Government has not done for its improvement all that it might have done.

III. Experience in all parts of this civilized world shows that there is no branch of industry in which the effects produced by the

application of science are more certain or more remarkable. When the light of science has been properly brought to bear upon Indian agriculture, the results will be as great as they have been in Europe.

IV. The duties which in England are performed by a good landlord fall in India, in a great measure, upon the Government. The only Indian landlord who can command the requisite knowledge and capital for the improvement of the land is the State. There is perhaps no country in the world in which the State has so immediate and direct an interest in such questions. The land revenue, which yields twenty millions of our annual income, is derived from that portion of the rent which belongs to the State, and not to individual proprietors.

V. Every measure which can be taken for the improvement of the land, immediately enhances the value of the property of the State, and adds to the public resources without the imposition of any fresh burden on any class of the community.

VI. The means of obtaining agricultural instruction in India are no better now than they were fifteen years ago. In almost all civilized countries, in which the form of Government is centralized, the efforts of the people are aided by the co-operation of a State Department of Agriculture, which works in part directly through its own agency, and in part through agricultural and other societies. The work that is performed by the great agricultural societies of Europe must be performed in India by the Government, or not at all.

#### *Endorsement of these views by H. M.'s Secretary of State.*

The relations in which the Government stands to owners and occupiers of land in India is altogether peculiar, and however that relation may be described, it is certain that, with the exception of the permanently-settled provinces of Bengal, the Government has a direct and immediate interest in the improvement of agriculture which is possessed by no Government in Europe.

#### *The work of the Department as contemplated by the Governor-General in Council.*

I. Supervision of the advances of public money (*tuccaves*) for works in the construction of which the assistance of the Government may properly be given to the owners and occupiers of land such as

- (1.)—Wells and other works for the storage, supply, or distribution of water for agricultural purposes, and the preparation of land for irrigation;
- (2.)—Drainage;
- (3.)—The reclaiming of land from rivers;
- (4.)—The protection of land from floods;
- (5.)—The reclaiming, clearing, and enclosing of waste lands for agricultural purposes;
- (6.)—The clearing of land from stones or other obstacles to cultivation.

II. The periodical collection and publication of agricultural statistics to which little attention has hitherto been paid: the knowledge derived from such statistics must form one of the main foundations of measures of improvement.

III. The administration of the forests. The forests have hitherto been placed under our Public Works Department. In the absence of any special branch of the administration to supervise the improvement and development of the vegetable productions of the country, the formation of a special Agricultural Department would provide the most suitable means of controlling the forest administration.

IV. The fisheries of India. This is a subject which has hitherto been little cared for, but which appears likely to prove of considerable economic importance.

V. Encouragement to the growth of industries suitable to the people and natural resources of the country.

VI. The establishment of a system of industrial education. The preparation of popular treatises in the languages of the country on industrial subjects, and their dissemination among the artisan classes.

VII. Questions of commercial taxation, the statistics of trade, both external and internal; the development of manufacturing industry; the law of patents; the mineral resources of the country; questions relating to the census and to emigration; and all other kindred subjects connected with the development of the material resources of India.

VIII. The improvement of the breeds of horses and cattle, and of other domestic animals. Measures for preventing and alleviating the destructive murrains which so frequently occur in the country.

IX. The improvement of Indian cotton, by careful and prolonged experimental cultivation, improvement of other Indian fibres, for which a very large demand might be established in the markets of Europe. The cereals of this country, and by the careful introduction and continued use of selected seed of a superior character, also the oil seeds, the pulses, and other products.

X. The management of the Salt Department and Inland Customs Departments, and hereafter, of some of the other sources of income which are technically called "separate revenue," may fall naturally and properly within the province of the new office which we suppose to constitute.

It is in the branches of the separate revenue that an intelligent and active administration by the Imperial Government might probably lead to great improvements in the income of the State. It is only the Central Government that can readily obtain a knowledge of the various systems under which the revenue is raised in the different provinces of the Empire, and can apply the experience of one province to the improvement of the systems of training in others.

#### *Views of H. M.'s Secretary of State.*

(A) The reasons for including the land revenue in the same department with agriculture appear to be conclusive.

(b.) The application of measures for the improvement of agriculture must in the last resort be mainly left to the collectors of districts, and there is no other agency spread over all India which is capable of attending to the matter.

(c.) The Forest Department, now under the Public Works Secretary, would, of course, form part of the proposed branch of the administration, as also all measures for the development of the mineral resources of India, and of the fisheries, to which considerable attention has recently been paid.

(d.) I am, generally, of opinion that the subjects mentioned in the despatch will fall naturally within the purview of the department proposed to be formed.

(e.) Some few, however, such as the "law of patents," and "questions relating to the census and to emigration," seem to me to have no direct or immediate connexion with the general business of the department, and had better probably remain with those departments which they are now attached.

(f.) It may seem that the regulation of the trade of India so far as the Government is concerned, has little to do with the agricultural branch of the department. But it must be remembered that the trade of India is dependent on its exports, and that the exports must in the present and probably long future state of things in that country be provided from its agricultural products.

On a consideration of all the circumstances, I am disposed to think that the Customs revenue should be placed under the control of the department.

(g.) In regard to the minor branches of the miscellaneous revenue (abkaree, stamps, and income tax), they involve few administrative considerations, and require little more than the due collection of amounts fixed by the law. Their supervision might, as it seems to me, be left either with the Finance Department where it now lies, or be transferred to the proposed department, as consideration of convenience might suggest.

#### The Department as proposed by the Governor General in Council.

I. The formation of a separate department of the Government for the care of these great interests ought no longer to be delayed,—a department that would take cognizance of all matters affecting the improvement and development of the agricultural resources of the country.

II. We propose to constitute a Department of Agriculture and Commerce as a separate branch of the Home Department, and to place it under the supervision of a specially qualified officer, to be called Director General of the Department of Agriculture and Commerce.

III. It is clear to us that the Departments of Agriculture and Commerce should be placed under a common head; and the time may come in which it will be found desirable to constitute for this purpose an entirely separate department with a separate Secretariat. For the present, however, we think that a more economical arrangement may be adopted to meet the immediate requirements of the case. This arrangement will involve the necessity of making certain modifications in the existing organization of the Home and Financial Departments.

#### Endorsement by H. M.'s Secretary of State.

I. I am prepared to express my concurrence with the views expressed by your Lordship in Council, so far as regards the formation of a special department to be charged with the duties mentioned in your despatch, but I am unable to give more than a provisional sanction to the arrangement in the shape in which it is presented to me.

II. The proposed department should be designated the "Department of Revenue, Agriculture, and Commerce."

### SILK.

#### WILD SILK YIELDED IN THE AKYAB DISTRICT.

Agri-Horticultural Society's Proceedings, Calcutta, 23rd January 1871.

READ the following letter from the Deputy Commissioner of Akyab, relative to a species of silk-worm recently discovered in that district:—

"I send by post to your address a parcel containing a specimen in spirits, of a silk-worm lately discovered in the western portion of this district in the vicinity of the Mayo River; as also some cocoons and some specimens of the leaves of a plant on which the worms were found feeding. *Masara mentacea*, a myrtaceous shrub not unfrequent in the forests of Eastern Bengal, and throughout the Malayan peninsula.

"As far as I can ascertain at present, the worm is of the species found in Assam, and described as *Phalana Cynthia*; but I shall feel greatly obliged if you will identify the species and let me know what it is.

"The manager of the Poundabgun tea-estate, who discovered the silk-worm in a wild state, has not given very much information about it. He, however, states that the tree on which it was found was a low shrub, the name of which he could not ascertain. I have been unable to discover any name for the shrub from the Bengalees who live in the vicinity of the place where the worm was discovered.

"The cocoons were found on the tree in the jungle. The cocoons do not appear to have been gathered by the people,

or turned to any use. The silk-worm was known to them, not for its quality as such but merely as an article of food. The silk-worm appears to have been considered as being by some of the hill tribes in the neighbourhood—as a *silkworm*.

"Two of the worms reached me alive. One of them fed voraciously on the leaves of the plant on which it was found, but refused to touch the leaves of the caterpillar tree (*Palma Christi*), which are eagerly eaten by some silk-worms in Assam.

"Mulberry leaves were not available, and I was therefore unable to state whether the worm would eat them. As far as known, there are not any mulberry trees in the vicinity of the place where the silk-worms were found."

The Secretary mentioned he had sent these cocoons and caterpillar to Captain Hutton, who had obligingly favoured him with the following remarks regarding them:—

"Your caterpillar and the two cocoons from Mr. Ireland, Deputy Commissioner of Akyab, came safely to hand. They belong neither to *Attacus Cynthia*, nor to *Attacus Ricini*, but a species of *Atlas* of which we have two, one the common *Attacus Atlas* found here at Cachar and elsewhere, and the other at Darjeeling known as *Attacus Edwardsi*. The worms of the first feed on *Berberis Asiatica*, and on *Falcoaria insignis*, and one or two other forest trees; the food of the other appears yet to be unknown. To which of these species your specimens belong, cannot be fully determined until the moths come out next summer; but from the small size of the cocoon as compared with that of *Attacus atlas*, from the colour of the silk, and from a certain indefinable something about the larva, I incline to the opinion that the species is *Attacus Edwardsi*, or a new species. The cocoons appear to me to be identical with those sent lately from Cachar by Mr. C. Brownlow, which I also suspect to be *Attacus Edwardsi*; unless, indeed, the small size is to be attributed to insufficient feeding in the house, although the cocoons seem so well formed, and so full of silk, that this seems improbable. The moment the moth appears I will let you know the species."

#### SERICULTURE IN BENGAL.

THE Secretary submitted the following remarks, from Captain Hutton, in reference to the observations of Mr. DeCristoforis, which were read at the last meeting:—

"In the proceedings of the Society of the 20th December 1870, appeared a letter from Mr. G. DeCristoforis complaining of my having, as he alleges, made some remarks reflecting upon him.

"Mr. DeCristoforis must permit me to deny the soft impeachment, and to assure him that no reflection whatever was intended; but as a faithful recorder of facts relating to sericulture, I was bound to point out for the benefit of others the errors into which Mr. DeCristoforis had apparently fallen.

"It was not for me to guess that the gentleman alluded to the Centigrade and not the Fahrenheit thermometer, so that the alleged reflection arose altogether out of his careless manner of expressing himself.

"I repeat however *pro bono publico*, that the system adopted by the Natives of Bengal and their imitators for preserving the eggs of animals is about the worst that could have been devised, since the circulation of pure free air around the eggs is as essential for the well-being of the future insect as for the well-being of man himself, and this is simply a sober fact and no 'witticism' whatever; if Mr. DeCristoforis cannot recognise this truth, he will never become a thriving sericulturist. Sound sanitary principles are as essential to the preservation of insect health as to man himself, and this is all I intended to point out.

"As to improving the *polyvoltine* species now under domestication in Bengal, it will be perfectly impossible so long as the present system of cultivation is persevered in, for they receive not only poor feeding, but all attention to cleanliness and free ventilation is totally disregarded. Even the climate is inimical, for the worms cannot be reared upon the trees in the open air as nature intended they should be, and as I have done at Mussoorie with the alleged annual *B. texor*, and the *polyvoltine B. sinensis*. Eggs of the latter transmitted to Bengal as soon as deposited, would now reach their destination previous to hatching, and obviate the necessity of establishing a silk farm in Bengal where the same method cannot be pursued.

"In conclusion, I beg leave to express my regret that my remarks should have given offence to Mr. DeCristoforis, to whom I wish every success."

### MINERAL RESOURCES.

#### COAL AND GOLD IN MYSORE.

THE following letter from Dr. Hunter to Dr. Orr at Bangalore has been placed at our disposal:—

"I received your kind letter with the box containing the samples of chlorite, decaying ditto, containing gold, and the other accompanying strata. I have examined them carefully, and have no hesitation in saying that they contain true gold, true coal, and all the minerals which accompany these two sub-



stones with the exception of the sand-stone which I asked for in my letter of the 11th. Along with the gold you have sent chlorite, both compact and shaly, chlorite slates, muscovite in black lumps, and some pieces of the sand (iron and chlorite almost invariably accompanying gold). There are also blue quartz and a rotten kind of corundum grains in large grains, or crystals which I have seen amongst the strata from the Australian gold-fields. The latter is yellowish white; yours is bluish grey and green from a little mixture of chlorite. The strata which you have sent along with the coal are also very good clay iron-stone conglomerate, oolitic-pudding stone; (this is often mistaken for a laterite, but it is a true transition conglomerate, very rich both in iron and manganese). I have it in seven or eight of our British coal series from Newcastle, Staffordshire, Coalport, Midlothian, Fife, Lanarkshire and Renfrewshire; you have also sent along with your specimens of coal, black-band iron, with a vein of quartz. Fibrous black haematite which resembles a piece of black petrified wood and portions decaying trap-rocks, all of which are favorable. The coal is very poor shaly stuff, but very like what I have seen as a first thin outcrop. It burns feebly, and emits a bituminous smell, but does not actually catch fire. It smoulders away at a full red heat and leaves a very bulky ash. It is in very thin strata, apparently not more than  $\frac{1}{4}$  an inch to three-fourths of an inch in thickness and much discolored with the decaying green chlorite earth. It is also in very small pieces, but this is so far favorable as it is not likely to have been thrown there with all the accompanying haematite conglomerates and band iron as these are never exported with coal, though I have seen an occasional lump of iron-stone thrown out of coal bags on the beach. The coal you have sent, however, is poorer than any of those lately received from Colonel Haig from the Tal river, and the Godavery, or the coal from Chanda and the Nerbudda. To determine first, if it occurs *in situ*, over any large surface, I would recommend you to apply to the Mysore Government for sanction to dig one or two holes at distances of twenty or thirty feet from the hole where this was thrown out, and let the coolies dig deeper to see if there are not frequent repetitions of the same strata, for true coal never occurs but in extensive beds, and the first few seams are seldom worth working. If you find any more seams I will come up at once. To enable us to determine the value of the chlorite earth, I wish you would order one ton of it to be sent to the School of Arts. I will get it washed and the gold tested by the Professor of Chemistry, Dr. Percy in London, and Dr. Archer in Edinburgh will be delighted to hear of your discoveries, and if you send me a basket full more of the rough stones already sent, I will get you the true coal of ... and Scotland in exchange, as they are promised already. You should also send us the lime-stones and sand-stones or slates of the vicinity. They are important."

#### THE MANDI SALT MINES.

We have taken some little trouble to ascertain the real facts connected with the temporary closure of the Mandi salt mines, and are glad to find that for once, the action of the Government does not, as we are at present informed, appear to have been so injudicious as it seemed at first sight to be.

It appears that long ago the Punjab Government foresaw that these Mandi mines might at some future period interfere seriously with the sale of salt from British mines, and they therefore, in concluding the treaty to which the present Rajah owes the possession of his principality, inserted a stipulation obliging themselves from time to time to regulate the sale of salt in such manner as they might think proper.

The sales at the time being very limited, and the duty in our own provinces comparatively light, no action was taken on this stipulation, but as time went on and peace and good order replaced the anarchy of the latter portion of the Sikh rule, multiplying facilities for trade and the increase of the duty on salt from British mines to Rs. 3 per maund, increased the temptation to import the duty-free Mandi salt, the sales of this latter went on increasing, until last year the Government found that, whilst they were imposing a heavy income-tax to make, as was supposed, both ends meet, they were throwing away some 3 lakhs of Customs revenue, by allowing cheap Mandi salt that paid no duty to displace within our territories fully a lakh of maunds of salt that paid Government Rs. 3 per maund.

The question was rather a difficult one, because although under the treaty the Government might have closed the mines at Mandi at once, they were very unwilling to do this, for the reason that the sale of this salt to the subjects of the Native State of Bishahir, &c., seemed a perfectly legitimate source of revenue, of which they were anxious not to deprive the rajah. They desired that he should make as much profit out of the mines as possible, provided that no portion of this profit was derived from assisting British subjects to evade our customs laws, and defraud the exchequer.

To put a cordon round the State was, from the nature of the case impracticable—the expense of any such line would have

been altogether disproportionate to the gain to be thereby secured. After much consideration it was decided as a preliminary step to require the rajah to double the selling price of the salt. The objects of this were two-fold—in the first place, the increase of price would greatly restrict the area, within our own territories in which this salt, which is very inferior in quality, could compete with our own duty-paid salt. In the second place, out of the enhanced price so realised, one-fourth was to be made over to Government in part compensation for the loss that it would still sustain by even the diminished import of Mandi salt into its territories, and to provide for the maintenance of a trustworthy European customs officer at the mines, who should register exactly all sales. This latter was perhaps the most important step in the new arrangements. It was undoubted that Government was losing at least 3 lakhs a year by these mines, but it was in a high degree probable that the loss was much greater, and it was from the first intended that should the registers after a year or two's experience show that the increase of price had not materially diminished the export into British territory, further and more stringent measures to prevent this should be adopted.

We heartily sympathize with the rajah should these measures lead to a reduction of his revenues, but we sympathize even more strongly with our own pockets, and we do not doubt that the Government possessing the right to do so by treaty, were not only justified in taking, but bound to take some such measures in regard to the control of the mines, as should prevent a waste of three lakhs of rupees or more yearly, which amount had of course to be made good by us in the shape of income-tax.

Every little helps, and we only wish the Bengal Government would act as promptly as the Punjab authorities. We understand that nearly three years ago it was officially pointed out to the Government of Bengal that they were losing some lakhs of rupees *net*, by the illicit manufacture of salt in Behar. A formal enquiry was made, elaborate reports submitted and printed, and the thing admitted to be one that *had* to be done, but to this day we believe that nothing further has been heard of the matter, at any rate nothing has been *done*.

To return to Mandi. The rajah not unnaturally raised objections. When a customs officer was deputed to the mines the rajah found a pilgrimage to Hurdwar necessary; the headmen in charge of the mines declared themselves unable without the rajah's permission to sell salt at the new rates. Buyers came in crowds, quite ready to purchase at these rates, but the managers of the mines would not sell an ounce, they had no orders from the rajah they said, so the mines were closed.

This was the old native plan of closing the shop as an expression of dissatisfaction.

However, a couple of months went by, the rajah found his residence at Hurdwar tedious and returned to his capital. Shortly afterwards taking a reasonable view of the circumstances of the case, issued the necessary instructions and re-opened the mines.

At first of course trade may be expected to be very slack, but it is not believed that in the long run the rajah's revenue will suffer. In the first place, even though the sales diminish, the price will be higher; in the second place, with a responsible European officer on the spot to check all sales, the *whole* price will now go into the rajah's treasury, instead of one-half thereof, as heretofore, absorbed by subordinates of various grades.—*Delhi Gazette*.

#### CULTIVATION OF OPIUM IN CHINA.

THE following memorandum on the subject of opium cultivation in China has been prepared in the Financial Department and is published in the *Gazette of India* of February 25, by order of the Governor-General in Council:—

The recent remarkable extension of opium cultivation in China has attracted much attention at the hands both of the Government of India and of the merchants in China interested in the opium trade. A large number of papers bearing on the subject were printed in a collection made in the Financial Department in 1870, and from these and a few other papers the information embodied in this memorandum is collected.

##### I.—Early Notices.

From the fact that the Chinese having in their language no specific word for opium call it "to," that is "earth" or "dirt," it has been argued that it is not indigenous to their country; but it should be noticed that the Consul at Canton quotes a Chinese word signifying the poppy plant from which the Chinese now manufacture it.

The earliest notice of opium recorded in the papers is quoted in the 1869 Trade Report from Hankow. It is there said that opium is noticed in a history of Yunnan (the south-western province of China), written in 1736, as being one of the products of Yungchang, a district of that province. It is stated also that a hundred years later, in 1836, a memorial was presented to the Imperial Government praying it to suppress the cultivation of



opium. This memorial had special reference to Yunnan, and it alleged that the yearly produce amounted to several thousand chests.

At that time the cultivation does not appear to have extended beyond Yunnan. Szechuen is the province next to Yunnan on the north, and it seems to be generally agreed that it was to it that the cultivation reached next after Yunnan. The extension must have taken place between 1817, in which year there is reason to believe there was no cultivation in Szechuen, and 1840 when, according to information recorded by a Mr. Gutzlaff in 1848, it was cultivated in no very large quantities in Szechuen. About the same time also it appears to have spread into Kwangs and Kweichow, the two provinces immediately adjacent to Yunnan and Szechuen.

#### II.—From 1848 till 1868.

The information recorded in 1848 stated above, does not represent native opium in these provinces as being exceedingly abundant. The Imperial Government was then thoroughly opposed to it, and the local Government and the Mandarins had to be propitiated with bribes, and sometimes apparently did not consent even upon receiving bribes. The popular feeling was also opposed to it, and a man who had fields of opium not unfrequently had them ravaged by the populace.

Certain delegates, deputed in 1869 by the Shanghai Chamber of Commerce to make enquiries about opium cultivation, state in their report that, ten years ago, natives say that in Szechuen all the opium grown was grown in small patches only in an amateur way, as a penalty of death was attached to its regular cultivation; but this "ten years ago," it is plain from the rest of the correspondence, should be interpreted as more nearly twenty, for by 1859 the cultivation was much more extensive than to be merely small patches. A provincial Governor, writing in 1860 or 1861, stated that all the opium consumed in Consu and Shensi, which are away to the north of Szechuen, and are both large provinces, was the product of Yunnan and Szechuen.

A very great increase of cultivation, therefore, must have taken place in these two provinces between 1848 and 1859, and this is specifically stated by the Consul at Canton in 1861. And concurrently with this increase of cultivation, probably indeed as the cause of it, there was a very great improvement in the quality.

The opium which about 1850 had come from these provinces to Canton is described as "coarse and fetid" and therefore very little used, and the reports of 1848, quoted above, say it requires to be mixed with Indian opium to be saleable. On the other hand in 1861, though still inferior to Indian opium, it was to a considerable extent consumed separately, and two samples which the Board of Revenue obtained were equal to Bengal opium. As the Canton Consul writes:—"The flavour is not relished by habitual smokers, among whom a prejudice against it further exists on the score of health. Yet its comparative cheapness recommends it to the lower classes and more especially to the rising generation of smokers." Its price was then half that of foreign, and "as regards the peculiar properties of the drug, an ounce of foreign is considered by smokers equal to two ounces of the native article."

The Chinese had, in fact, stolen a march upon India; for about 1851 the high price of opium, and the growing taste for it, induced them to send persons to India to procure the poppy seed, and to learn the mode of manufacture. From that time poppy cultivation received an impetus in Yunnan and in Kansu, and probably, though it is not so stated, in Szechuen which lies between these two.

At this time, 1859-60, it would appear that the opium produced in these western provinces of China supplied in full the local consumption. The produce of Szechuen and Yunnan was about 5,000 chests per annum, and of this half was consumed within the province itself, and half was sent to Chunsta (P) and to Shensi.

Hankow is the port in China which is nearest to these opium-producing provinces, and it is said that in 1860, while the foreign drug was not imported there at all, 2,000 chests of the native produce were brought, part of it to be consumed there, and part of it to be exported eastward.

In that year, 1860, the cultivation reached a maximum, and it now began to fall off. The following change took place in the imports at Hankow:—

Year.	Native drug.	Foreign drug.
1860.....	2,000	0
1861.....	1,500	250
1862.....	800	2,000
1863.....	500	1,455

and the export of native drug in 1863 was only 48 chests.

The cause of this change was two-fold. First, it was owing to the more complete opening of Hankow as a port. Foreign opium was admitted on better terms than it was before, and the line which separated the country consuming native, from the country consuming foreign, produce was driven back. In the second place, there was a real decrease in the cultivation. Rebel bands were marching about and devastating Yunnan and other provinces,

and in Szechuen a new governor had come, one Leo, a Cantonese, who was opposed to opium cultivation, and did a good deal to restrict it.

Of the state of the trade in native opium in 1863-64, we have some statistics gathered by the Customs Department in 1864-65. So far as regards Hankow, the statistics have been already given.

From Canton, which is not very far removed from the opium-producing provinces, and is therefore a grand base for the traffic between foreign and native opium, both being able without much difficulty to reach it, we have the information, that in 1863, the quantity disposed of was as follows:—

Yunnan opium.....	800	Chests.
Kweichow ".....	400	"
Szechuen ".....	200	"
Kwangtung ".....	100	"

Szechuen, it is agreed on all hands, had much more produce than Kweichow, but its export was apparently towards Hankow and the northern provinces, so that at Canton there was a larger import from Kweichow than there was from Szechuen. Kwangtung is the province in which Canton itself is situated, and cultivation spread into it in 1861, seed being brought from Yunnan. The climate, however, is bad, and the produce was not very large. Notwithstanding this large import of opium, 1,500 chests, it is stated that no influence was perceptible on the market for foreign opium. The increase in consumption throughout the region drawing its supplies from Canton was sufficient to counteract the evil effect of the competition of native opium.

At Shanghai also native opium had made its appearance. Five hundred chests had been disposed of there, having been mostly brought all the way from Szechuen, but the supply produced no perceptible effect in the demand for the foreign drug. The opium was inferior in quality and used only by the poorest people.

Near Amoy a little cultivation had begun, and was spreading; it had sent 50 chests to Amoy in 1860, and these had increased to 500 in 1863.

At none of the other ports was there any considerable consumption of native opium; but there appeared to be some in the interior. Some native marts north of Chefoo were stated to largely consume native opium. A little was cultivated near Kinkiang and consumed where it was cultivated, not being brought to market; a small quantity, 12 chests, were brought to Chinkiang to be sent into the interior.

From Shanghai it was stated that cultivation had recently commenced in Kwangtung (as above stated) and also in Chinkiang, within which province Shanghai is, but only in the parts of it, remote from official observation. Enough, however, was cultivated to displace about 20 chests per month of foreign opium sent from Ningpo into the interior.

In 1864, then, the general position of matters was this. The whole of Western China, containing the provinces of Yunnan, Szechuen, Kweichow, Kansu, Shensi, had within 15 years become opium-producing regions. They produced apparently quite enough opium for their own consumption, and we do not know that any foreign opium ever found its way there, but the circumstances are such that the mere absence of knowledge proves little. However, we know that in 1821 the cost of importing foreign opium into Szechuen was so great that opium was there worth twice its weight in silver, and we know that the very high price about 1861 drove the Chinese to set about cultivating for themselves. We know that the quantity of opium proceeding westward through Hankow was exceedingly limited, and we know that to the east of the opium-cultivating provinces the consumption was in a very great measure supplied by Yunnan and Szechuen opium. These facts render it likely that in 1864-65 there was almost no foreign opium imported into Szechuen and the other provinces; and as probably there was very little before, the effect, so far as regards them, was that people who before consumed no opium of any sort now took to native opium.

Although the extent of country is very large over which native opium thus came into use, the effect upon the demand for foreign opium generally would thus be very limited.

It must have been about this time that Jung Bahadoor's expedition mentioned in these papers took place. He marched into China taking with him 200 chests of opium which he expected to sell in Western China, but he found no one would have them, and he was finally obliged to bring them back. The people had become accustomed to the native drug, and no foreign drugs would be received in the market at all.

The line of provinces next to these western ones, Honan, Hupe, Hounan, we have not much information about; we cannot trace our own opium entering them, but we can trace the native opium passing through them. Kwangtung to the south of these are very little from the western provinces, and has begun to grow a little for itself, but its chief consumption is of foreign opium, and the native opium has as yet only met the increased consumption, and has not at all tended to oust Indian opium.

In the eastern provinces of China the foreign opium has as yet little to fear. In a few inland places, cultivation has been attempted,

ed, but only in a conventional manner; and though the native opium has been introduced in the interior, it has hardly appeared at all in the treaty ports (which not only receive foreign opium for forwarding into the interior, but through which also passes much of the opium which proceeds from one part of the interior to another). Moreover, it, according to almost unanimous opinion, produced any effect upon the demand for foreign opium.

### III.—After 1864.

The mass of information which we have after this date (1864) refers to the position of matters in 1866 and 1869, but in some passages reference is made to events that had occurred between these two dates.

The Viceroy of Szechuen, who had done so much to oppose native cultivation, died in April 1867. For a short time before that event, either his prohibition had become less weighty, or the people had become more obstinate, for cultivation had already for a year or two been slightly increasing; but when he died, the cultivation at one bound regained its former dimensions. Cultivation had also recommenced in Yunnan, where it had previously been interrupted only by the disturbed state of the province. Yunnan had now set up practically as an independent kingdom under a Mahomedan governor.

Mr. Cooper, who travelled in Western China about 1868, stated to the Board of Revenue that the cultivation of the poppy was almost universal in these two provinces, and covered, as he estimated, an extent of 60,000 acres, a figure which, as is plain from the other information, is a large under-estimate. This cultivation had all sprung up within five years. Sir R. Alcock also estimated in February 1869 that two-thirds of Szechuen, and one-third of Yunnan, were under opium cultivation. The Hankow Chamber of Commerce wrote, in the beginning of 1869, that now the whole of Szechuen, and one-third of Yunnan, were under opium cultivation, and they expected that 7,500 chests would be produced that year (April is the gathering time), and that they would receive 2,000 for export eastward; whereas in the previous year they obtained only 142. Mr. Keswick, a Chinese merchant (Jardine, Matheson & Co.), writes that the crop of 1867 was a large one, and that of 1868 was twice as large; and Mr. Gribb, another merchant (D. Sassoon, Sons, & Co.) writes in November 1869 that Szechuen is now thoroughly under opium cultivation, and that 3,500 chests were produced in 1868, and the crop of 1869 was estimated to be fully 5,000 chests.\* The quantity grown in Yunnan appears to exceed that grown in Szechuen; the enquiries of the Shanghai delegates obtained this result, and in the Hankow Report for 1869, the crop of Yunnan is estimated at 20,000 against Szechuen 6,000. The writer of the report, however, in sending in these figures, says that the Yunnan estimate of 20,000, and that of Kweichow 15,000, appear to him to be excessive.

Previously to this great extension of cultivation Yunnan and Szechuen were already independent of any supply of foreign opium, and a writer in the *Far Eastern Review* in March 1870, who seems to write with authority, says that in these two provinces the natives will not look at Indian opium; they have sufficient native opium, and think the Indian too strong. The Shanghai delegates also say that, whereas Szechuen used to import opium from the other two provinces, Yunnan and Kweichow, it is now independent of them also. It is stated, however, in a letter from Kiukiang in 1868, December, that foreign opium was still consumed to some small extent in Szechuen itself by people whose means enable them to disregard the difference of cost; and at Hankow, through which passes the Indian opium destined for Szechuen, as well as for other places in Western China, the demand for foreign opium had up till 1867 continually risen though not so much of late years as before.

A Hankow newspaper of about December 1868 sums up the information thus:—

"In Szechuen the opium found a genial soil; the numerous rivers and great internal trade of the region procured for it a ready market, so that now Szechuen opium may be said to supply the entire of the west of China. At Hankow, in comparison with its other imports, that of opium is comparatively insignificant. Hankow, in fact, stands upon the boundary line, dividing the districts favouring the foreign from those which prefer the native article. There are even indications that the use of the Szechuen drug is spreading in eastern China."

This extract, compared with other information, appears to be in error only in giving undue importance to Szechuen opium as compared with Yunnan.

The enquiries of the Shanghai delegates give a good idea of the trade in Szechuen opium. They say it is chiefly in the eastern part of the province that the cultivation is extending, and that thence much opium is smuggled into Hounan province, and a good deal also as far as Canton. From other Szechuen districts it is exported by Hankow and other marts to the Hounan provinces, and to the ports on the Lower Yangtze and on the coast. The Yunnan opium, they say, is consumed in large quantities by

the wealthy people of Szechuen, and passes also, though not in large quantities, through Szechuen into Shensi, Shanai, and Kansu.

The Consul at Hankow makes the same statement as to the eastward flow of the Szechuen opium, but it is remarked that he says, it is Szechuen, and not Yunnan opium, that is consumed in Shensi. This statement is more likely the correct one, for it will be observed that the Shanghai delegates make the Yunnan opium reach Shensi through the producing districts of Szechuen; it is unlikely, if this were the case, that Szechuen opium would not go also.

The Consul at Canton, writing in 1869 of the Yunnan opium, says that it is brought into the Kwangtung province, and estimates its import at 75 chests a month, or 900 a year. And the Consul at Hankow makes a statement of similar effect that nearly all the opium produced in Yunnan is consumed in that province, and Kweichow and Kwangtse, so that Yunnan appears to supply the whole south-western quarter of China, while the Szechuen spreads from the south-western quarter north-eastwards, and eastwards.

The extent of the whole exportation of native opium may be judged of from the quantity of it received in Shanghai alone, a place remote from the producing districts and easily accessible to foreign opium. The *Shanghai Courier* of June 1869 says that large parcels of native opium have been imported and offered, at a price much lower than Indian, and the Messrs. Sassoon, Shanghai merchants, estimate the consumption of it at 600 chests per month.

Much of the quantity thus exported is intended for adulteration with the foreign drug.

But during the past few years, not only has the exportation and consumption of Szechuen and Yunnan drug extended, but cultivation has greatly increased also in other parts of China.

Kwangtung did not afford a very favourable soil, and the cultivation there had not very much extended, but supplies were coming into it from Hounan in the north.

In Hounan and Hoopie opium was said to be grown over a very large area, though the Shanghai delegates did not consider the produce to be of any commercial importance, by which, it is presumed, they mean that it only creates and supplies a local demand. In fact, the Hankow Consul states that the whole produce of Hounan is only 42 chests and Hoopie, as we have seen, derives most of its opium from Szechuen. North of these two come Shensi and Honan, in the former of which there was already a considerable cultivation in 1864. There is still a large area under opium in Shensi, but the produce is of inferior quality; and as Shensi imports native opium to a considerable extent, it is probably not very favourably circumstanced for cultivation. In Honan, the growth of opium is said to be steadily extending. In Kiangsi also the cultivation was increasing, the south-west of the province being the principal cultivating area. And even in Chekiang, the very centre of the eastern coast of China, we are informed that the cultivation was rapidly spreading, and the crop of 1869 exceeded by one-half that of 1868.

In January 1869, a proclamation against opium was put out by the Emperor, and it starts with the statement that opium, commencing in Kansu (the remote and rebellious districts of Szechuen and Yunnan are apparently ignored) and spreading into Shensi and Shanai (where we have already seen it) had recently extended into Honan, Kwangsi, and Shantung, the last two being provinces on the coast of the Yellow Sea, where we have not yet seen it. This edict had very little effect, and the latter had soon passed away. In fact, it is the opinion and action of the local authorities, and not of the imperial, which for the most part rules matters in China; and the fact that the Governors of Kiangsi, Hokwang and Szechuen are all in favour of opium cultivation, and think it might be made a source of imperial revenue, is quite enough to over-ride any imperial edict against it. In fact, it is doubtful if the edict was ever promulgated in Szechuen, at least till very long after it came out.

As regards Shantung, which has just been mentioned as one of the provinces specified in the edict, we have some particular information from the Consul at Chefoo. The production amounted to 100 or 200 chests, and was increasing from year to year. The whole, however, was consumed near the place of production.

No mention has as yet been made of another direction in which the cultivation of opium was extending, for within the past few years a new opium province has started up away in Manchuria and Mongolia, north and north-east of China proper, a region which, like Szechuen, has become an exporting district. A Mr. Williams, in 1869, wrote as follows of this part of the empire:—

"A few years ago opium was a stranger to this quarter of the world, but now it is rising with great rapidity into ominous and terrible significance." In some places it had been grown for several years, in other places for only two or three, and in some it was just commencing. The cultivation was more profitable than that of pulse or any grain, in the proportion of 24 to 14. The opium was exported to Peking and westwards of it.

According to Mr. Keswick, a Hongkong merchant, it passed into Manchuria from Shensi.

\*It is 20,000 in the original, but this appears to be a misprint for 5,000. A *Shanghai Courier* of 1869, p. 10, says "the opium crop in 1869 was 4,200 chests, and the estimate of a full crop for the next year was 5,000."

The Tien-tsin Consul, writing in 1869, spoke of the vast region of eastern Mongolia and northern and central Manchuria sending down supplies towards Newchwang, the port nearest that part of the country.

The Consul at Newchwang also wrote of this importation and estimated it at 1,300 chests, and a Shanghai firm wrote that the natives of Manchuria were more and more turning their attention to it. But Szechuen opium found its way to the same place also, coming round by Shenai.

#### IV.—Competition with Indian Opium.

Such then being the extent and direction of the trade in Native opium, it is important to examine how far its introduction has interfered with the trade in Indian opium.

In the western provinces we have seen that almost the whole consumption is of native opium. There never was any but a very limited import of Indian opium to that part of China, and the effect, so far as regards it, probably was only this, that the native opium prevented that extension of importation of Indian opium which we might otherwise reasonably have expected from the more complete opening up of the port of Hankow.

At Canton not much effect had as yet (1869) been produced upon the import of Indian opium, but the Consul wrote that the growth of native opium had increased considerably during the past few years, and bade fair to prove a formidable rival to the Indian production, particularly if increased consumption were to favour improvement in cultivation. As yet there were only germs of a formidable competition; and native opium had, so far as regard the city itself, been used only to mix with Indian opium.

From Hankow we have valuable information on this head. They point out the recent general increase of cultivation in the west and north, and say that only governmental interference prevents its extension to the sea-board provinces; they consider the matter only as a question of time, for opium cultivation has taken too firm a hold in the country ever to be repressed. They talk of opium as an import that is likely to diminish, and estimate that other foreign goods will take its place.

From Hankow, we learn in the report for 1869, that since autumn of 1868, native opium had formed a common article of commerce in the market, and the two productions are talked of as rivals, and as being treated as such by the native authorities.

From the Consul at Tien-tsin, we learn that native opium has been increasing, and Malwa (the principal foreign importation) has been decreasing, since 1866. The price also of foreign opium has been decreasing, and the conclusion must be that native is taking the place of Indian opium. Opium smoking is stated to be on the increase, so that it is plain that the increased demand for native opium is the cause of the reduced demand for Indian.

A year later, in the Tien-tsin Report for 1869, the same features are apparent, and the same conclusions are repeated. "From, all I can gather there is no doubt that the consumption of the native drug is increasing considerably, and to the prejudice of the Indian." It is stated also that the trade in Indian opium is beginning to be a losing trade.

From Newchwang the report is different. The consumption of native opium is increasing, especially in the interior, but the importation of foreign opium has not decreased.

The Shanghai *Courier* of 9th June 1869 thus writes:—"Extinction more or less rapid is threatened by the progress of the poppy cultivation in this country." They say that in 1868 there was an unusually successful crop in Western China, and that the Chinese drug almost entirely supplanted the foreign kind in many places formerly supplied from Hankow, and actually made its way to Shanghai where large parcels of it had recently been exposed for sale at a price considerably below that of Indian.

Large quantities of opium (this is still a quotation from the *Courier*) brought from the districts bordering on Manchuria interfere seriously with the market for Indian kinds at Newchwang. In fact native opium is now met with in all the principal marts of Northern China, and while it monopolizes the consumption in many parts of the interior—nearer the coast it is principally used in admixture with Malwa. Malwa has been recently falling in price solely through the competition of native opium. It will ultimately reach a low enough price successfully to compete with native, but meantime there is danger that the consumers become habituated to native opium.

The Chinese firm above alluded to corroborate these statements in saying that the bulk of the population prefer native opium for its cheapness, and even the rest mix their foreign with native. If this occurs at Shanghai, it may be understood how greatly the import trade generally is affected.

We have reserved for the last place the opinion of the Shanghai delegates, which is of much more weight than any yet quoted, and which is said by Sir R. Alcock to represent the opinion of all who are most conversant with the subject.

Cultivation, they say, is very profitable, and everywhere it is increasing. Proclamations against it go out from time to time, but fall harmless to the ground. The cultivation is too common

a thing to be now put down, and the executive authorities are obliged to shut their eyes to it. Some of the other papers say the same thing, that proclamations have been put out, but that they are practically ineffective.

Consumption of opium is everywhere increasing at a rapid pace, the natural result of the cheapness of the opium; eight out of every ten men, and five out of every ten women, according to the popular belief, smoke. The higher classes are becoming so alarmed at the spread of the habit that they are beginning, by their example, to discourage it.

Yunnan and Szechuen are favourably situated for communication with the rest of the empire, having water transport to the southern, central, and eastern provinces, and land transport to the northern. And though native drug is inferior in strength and flavour to the imported, its cheapness has enabled it entirely to displace foreign drug in the interior of the country. At Shanghai, after paying all charges, it can be laid down at 70 per cent. of the price of Malwa, before paying any taxes. The cheapness of native drug is the present cause of the exclusion of Malwa, but the taste for native drug once formed will tend to perpetuate the exclusion, even should the economical consideration pass away.

They then show from the figures of importation that the import of Indian opium, up till 1850, rose year by year at a high rate. Up till 1855 it still rose, but after that year it was stationary. But there is so much concurrent testimony to the fact that consumption is increasing year by year, and at a faster rate than it did before 1854, that no other conclusion can be arrived at than that native-grown opium is actually superseding the Indian product.

There is one thing to be observed with reference to this reasoning, namely, that one reason of the supply having remained stationary since 1855 was, that no more was produced in this country, and that there were great difficulties in producing more. The more correct reasoning would have been that the increased demand after 1854-55 not being met by an increased supply, ran up the prices so high as to bring native opium into the market.

#### V.—Price of Chinese Opium and of Indian.

We may proceed now to collect the information regarding the price, as compared with that of foreign opium, at which native opium can be produced and brought into market.

In the early days of the cultivation, about 1840 to 1848, when large fees had to be paid to bribe the Mandarins, and great risk was incurred in the cultivation, it is stated that it could not be produced under Rs. 1,350 a chest, and by this is apparently meant the price in the producing regions. This statement, however, is perfectly irreconcilable with that of the Consul at Canton, who says that small quantities of the "coarse and fetid" opium then produced were brought there in 1847-48 and sold at a rate equal to Rs. 300 only per chest. This last is probably the more reliable statement of the two. In 1854-55 the price at Canton was over Rs. 700 per chest, and in 1859-60 it was about Rs. 1,300, the difference being probably due in a great measure to improvement in quality.

From the reports obtained in 1864 we obtain the following information as to the prices ruling in the various ports.

At Hankow, which is nearest the seat of opium cultivation, native opium cost 30 per cent. of foreign, but the additional strength of foreign more than made up for this difference. The price of Malwa at Hankow was at that time (judging from the price at other places) about Rs. 1,700, and Patna probably about Rs. 1,600; and native opium must therefore have been about Rs. 1,150. This must have been the cheapest price at which opium could at that time be laid down in Hankow, for as the Indian opium was at that time overcoming the native, it is fair to assume that the native was selling at no artificially raised price.

At Shanghai at the same time the native opium was selling at Rs. 1,125, while Malwa was at Rs. 1,590, and Behar at Rs. 1,500. The Hongkong prices at the same time were Rs. 1,520 for Malwa and Rs. 1,440 for Behar. The native opium at this price was producing no effect in the demand for foreign.

At Canton the price of native opium was Rs. 940 against Patna Rs. 1,190 (?) and Malwa Rs. 1,310, and it was not affecting the demand for foreign opium.

At Newchwang, in 1861, the price of native opium was Rs. 900, and of foreign Rs. 1,800. This price (Rs. 900) seems lower than the prices quoted above as ruling in 1863. The reason was likely this, that native opium was then unknown at Newchwang, and there was hardly any demand for it. This further appears from the fact that the importation of it ceased after 1861 at Newchwang.

At the treaty ports in 1864, therefore, the price of native opium was about two-thirds that of foreign. In the interior foreign cost a little more, as it was sure to have some duties to pay in passing from the ports into the interior while native could reach the interior just as cheaply as it could reach the treaty ports.

We come now to the papers of 1869, and before stating their contents, it may be well to mention that the prices in Hongkong were as follows:—Behar opium during the last half of 1868

and the last half of 1862, was at Rs. 1,450 or so; Malwa during the same time was at Rs. 1,400, except that in the beginning of 1863 it got up to about Rs. 1,500.

From Hankow we learn that the price of opium in the producing districts was about Rs. 800, while Indian opium laid down in Shanghai would cost nearly Rs. 1,000. In Hankow itself native opium cost about Rs. 1,000, while Indian was at about Rs. 1,710 at the end of 1860. A year before they were both cheaper, Rs. 670 and Rs. 1,530 respectively; but the ratio is in both cases nearly the same, native costing about 40 per cent. less than foreign. "At this price," says the Hankow report for 1866, "the importation of foreign opium is considerably short for the last two seasons, but this is not to be wondered at, when every shop-keeper in this and the surrounding districts advertises native drug for sale."

Of Canton we have only general information that foreign opium cost twice as much as native, but was nevertheless preferred by many, and native was in fact used only to mix with foreign. The Consul, writing in May 1869, says that the price of native was about Rs. 900, and at that time the price of foreign must have been Rs. 1,500 at least. At this respective price foreign does not seem to have been ousted at all, for though the Custom House figures showed a great falling off, little can be concluded from that, for it is said in the 1869 report that of the opium imported 92 per cent. comes in surreptitiously. The taste for native opium does not appear to have yet sprung up in Canton.

At Shanghai, where both were largely consumed, native cost Rs. 1,100, Malwa Rs. 1,500, and Patna Rs. 1,300.

At Tient-sin Malwa opium cost Rs. 1,590 or so, and native cost Rs. 1,060 or two-thirds of Malwa. At these prices it was, according to the Consul's opinion, ousting foreign opium. Malwa was slightly cheaper in 1869.

At Newchwang native opium costs Rs. 650 or 700 less than foreign. But foreign must be rather dear in so remote a port, possibly Rs. 1,800.

Up to this point the information as to prices has been taken only from the Consul's and custom officers' reports, and they lead to the conclusion that native opium is produced in Western China at a cost of about Rs. 650. When it gets to Hankow the cost, including the various taxes it has paid, is about Rs. 950 and when it gets to the eastern coasts of China, its value is about Rs. 1,050 to 1,150. At the treaty ports the price of native is about two-thirds that of foreign, and at these prices they complete on fair terms. At Hankow, where the difference in price is more than one-third in favour of the native, native has the advantage, and in the interior of the country, where native costs the same as it does in the treaty ports, but foreign costs more (having various transit duties to pay), native also has the advantage.

The conclusion of the Shanghai delegates are almost the same as those just stated.

#### VI.—The quality of Native Opium.

It remains to compare the native and the foreign opium as smokable articles, and here it may be convenient to distinguish the various sorts of Chinese opium by their Chinese names. We may therefore explain that Nantu signifies the opium grown in Yunnan, Chuentu signifies the opium grown in Szechuen, and Kweichowtu signifies the opium grown in Kweichow; the names being in each case taken from those of the producing provinces.

The only opiums about which we need concern ourselves are the three sorts just mentioned, and perhaps also the sort imported from Manchuria. The opium of other places cannot compare with this in quality, and moreover it hardly comes into competition with Indian opium, being consumed only where it is grown.

The manner in which opium is used for smoking must be first stated. The opium is first to be purified, and with this object it is boiled so as to mix with water, then strained, and then boiled down to viscosity. When cool it is fit for smoking. The smoker taking a little of it on a needle-point, kneads it, and burns it a little by occasionally passing it through flame; the object of this process being apparently only still more to dry it. When its consistency is like that of wax it is formed into a cone round the needle, and then the point of the cone being introduced into a hole in the pipe, the needle is withdrawn and the opium is then applied to flame, and inhalation made through the passage left by the withdrawing of the needle.

We have already referred to the great improvement that had taken place in the quality of Chinese opium before 1864. We shall now note what is said about its quality in 1869.

The Canton Consul writes: "Of late it has not been inferior in quality to Malwa, although in flavour it is weaker than the foreign opium, and it is said to be less hurtful to the constitution. The opium-smoking shops use a mixture of 7/10ths foreign and 3/10ths native drug." In 1864 a Canton officer had written that the native opium was hardly used in its pure state, as its grainy taste caused it to be disliked, but this was less perceptible than before, as attention had been given to the subject.

In the Consul's report from Kowkiang, the following occurs (Kowkiang being an internal port appears to have good information

on the subject):—"The native drug is inferior in quality, bitter to the palate, and deficient in strength and flavour. People accustomed to it prefer it, as though its being weaker they can enjoy it longer without becoming intoxicated." The properties of the foreign drug when prepared are estimated at 30 to 50 per cent. greater than the native. And the foreign drug also gives more of the prepared drug, giving 75 per cent., while Szechuen opium gives 58 to 70 only. The difference in strength is accounted for partly by the fact that the native drug does not burn so well as the foreign. In fact the refuse of the first preparation can be re-boiled and again used.

In the same report it is said that most of what is sold in Hankow or comes further east is used for admixture with foreign, but not more than 33 per cent. can be mixed without its becoming perceptible to a smoker, by which is probably meant, so far perceptible as to be liable to objection, as a detraction from the purity or strength, or flavour of the article.

The Consul at Newchwang writes of native opium, that "good opium yields 90\* per cent. of the prepared drug; the second class yields only 70 per cent. The best Indian opium yields only 85 per cent., but the strength and flavour are much superior to those of native growth.

The same gentleman subsequently writes of the opium grown in the north of China—"I am told this is the finest of all the opium produced in China. It sometimes yields full weight of the smokable drug. Malwa I believe yields 80 to 85 per cent. of the pure drug; this ranges somewhat higher, yielding from 85 to 90 per cent. The Chinese opium is not only capable of being smoked twice, but the drug obtained from boiling the ashes is preferable to the first preparation."

The Newchwang report in 1867 talked of this northern opium as "well-flavoured, but deficient in strength."

The China firm from which we have before quoted ranks the opium according to quality, after being boiled, thus—taking Malwa at 75, Yunnan was 50, Szechuen 44.3, Kweichow 43.5.

In the Hankow report for 1869 it is written—"Of the Szechuen drug, that produced in Kaihsien and Peichow approaches nearest to the foreign article, yet it is not so tasty. In Szechuen it is held that one ounce of native drug produces less smokable matter than the same quantity of foreign. It is moreover asserted that the strength of the foreign drug is exhausted by one smoking, whereas the native article stands four or five re-preparations."

The following is taken from the report of the Shanghai delegates.—The quality and strength of Szechuen opium varies according to the district. Fungtoo opium yields 75 per cent. of extract, Foo 70 per cent., Kai 80 per cent. Of Yunnan opium, which it may be remarked realizes in the China market a higher price than Szechuen, and is generally admitted to be the best, they write:—"The Nantu yields 80 per cent. of extract, is of finer quality and possesses better medicinal properties than the Szechuen, and is longer in consuming."

In comparing, upon the basis of the information thus given, the native and the foreign opium, the following conclusions seem to be indicated:—

(1) Chinese opium, in respect of its standard of purity, and of the nature of its properties, so far as a smoker is concerned, does not differ from Indian opium.

(2) Indian opium, however, exhibits these properties in a more marked degree; in other words, it is of great strength and preferable flavour. The preferable flavour is everywhere admitted, and is in every case an element of preference. The greater strength is not so, for many people prefer what is weaker; and the Indian opium is to such people too strong for their taste.

(3) The additional strength is partly an inherent quality, just as the better flavour is, and it is partly the result of a difference in the capability of consumption. The native opium consumes neither so readily nor so completely as the Indian; not so readily, inasmuch as it takes a longer time to consume; nor so completely, for the ash after the first consumption can be boiled a second time, and the second preparation can be again consumed. This can never be done with Indian. India, however, gives, to begin with, a larger proportion of consumable matter than native opium.

Apart, therefore, from the flavour, which is an indisputable advantage possessed by the Indian opium, the difference between the two is the difference between a smaller pleasure spread over a longer time, and a greater pleasure enjoyed during a shorter time.

As to the mere quantity of pleasure contained in the same bulk, if it were possible to make such a comparison, the difference is in favour of Indian opium; that is, if the consumption of the Indian could be so retarded as to make it give out only the same strength as the native, then it would out-last the same quantity of native by a proportion probably not far different from the ratio which the prices ordinarily bear to each other.

\* The original says 12, but 90 is clearly meant.



## THE BUDGET-1871-72.

(Abridged by the "Indian Daily News.")

THE Legislative Council of the Government of India met at Government House yesterday, the 9th March, 1871, at 3 P.M.

The following members were present:—His Excellency the Right Hon'ble the Viceroy, (presiding,) His Highness the Maharajah of Jeypore, G.C.S.I., Hon'ble Sir Richard Temple, K.C.S.I., Hon'ble J. Strachey, Hon'ble Mr. Ellis, Hon'ble Fitz-James Stephen, Q.C., Hon'ble Major-General Norman, C.B., Hon'ble the Lieutenant-Governor of Bengal, Colonel the Hon'ble R. Strachey, C.S.I., Hon'ble Mr. Cockrell, Hon'ble Mr. Robinson, Hon'ble Mr. Inglis, Hon'ble T. Cowie, and Hon'ble J. N. Bullen Smith, &c., &c., &c.

Owing to the interest that the delivery of the budget statement invariably excites, and especially upon this as on the last occasion, the ordinary Council chamber was found too small for a large audience, and the Council accordingly met in the Marble Hall of Government House. The number of ladies present, although it was notified that special arrangements had been made for their having an opportunity of hearing the financial statement, was but small. There was a good attendance in the Hall consisting principally of the official and commercial classes. There were also a number of native gentlemen present. The seats were taken early, the proceedings commencing at 3-15 P.M. and ending about 6 P.M. Several persons left the Hall however before the conclusion of Sir Richard's statement.

His Excellency the Viceroy having taken his seat, called upon the Financial Minister to make his annual budget statement.

Sir Richard Temple, in submitting the financial budget of British India, for the official year 1871-72, said that this was the twelfth annual statement presented since the creation of the existing financial system. He would proceed to deal with the figures in the same order as that observed in all previous statements; namely, first the actuals of 1869-70; second, the regular estimate of 1870-71; lastly, the budget estimate for 1871-72. He would take the figures from the combined statement in the same manner as he did last year, and would begin with the past year 1869-70. The Council would remember that the regular estimate for that year exhibited an anticipated deficit of income of £625,594, or more than half a million sterling. The actual figures now showed a surplus of £118,668. The receipts of the year were taken in the regular estimate at £50,297,052; they have proved to be more by £604,029. This favorable difference in the expenditure arose chiefly in the military accounts and partly also from the amount of unpaid dividends, and from other sources. In a word, the largest difference in the whole account, £815,116, was owing to the favorable financial effect of the military reduction that had been ordered. In the original estimate a large deficit was anticipated on account of the fall of opium and various financial measures were taken to prevent the threatened deficit. The result proved that there was an actual surplus of £118,668. This was owing partly to management and partly to fortune. It seemed to be understood in some quarters that the favourable results just described were not the result of the financial measures introduced, which were absolutely unnecessary. He would declare, for the last time that those measures were both just and necessary, and that there was not any difference of opinion in the Government of India on the subject. He then demonstrated that these measures bettered the account by one million and a half, and it seemed to him that this was as strong a financial result as any of these measures, as could be reasonably expected. In some other quarters, again, it was thought that the small surplus had cut away the ground for the increased rate of income-tax in 1870-71. He could admit however nothing of the sort. The condition and prospects of the year 1870-71 must first be considered. The estimate of that year was framed on a data of its own. Even if the actual figures of the year 1869-70 had been known, the prospect of deficit in 1870-71 would have remained. The surplus of one year could not mitigate the prospect of deficit in another.

The receipts were estimated in the budget at £49,479,585; they are now estimated at £51,048,900, showing a difference in favor of some £1,569,315. Of this increase the main item was one million under the head of opium. In this last exposition he gave to the Council the reasons why the estimate of opium had been cautiously framed. The improvement of the opium trade in China must have had its causes, one of which was perhaps the indigenous culture of the opium in China itself. However, whatever the real causes were, he was not in a position to explain satisfactorily. All he could say was that the Council was carefully watching every detail; but it must be added that at the commencement of the year they had no right whatever to reckon on the improvement that has accrued. Therefore this stroke of fortune did not in the least shake his conviction of the prudence with which the estimate was made; nor did it encourage him to relax the watchfulness and caution necessary in framing the opium estimates for the coming year.

There were some items of increase which required explanation. There was an increase of £92,508 under land revenue, which was

owing to considerable improvement in Madras from the realization of arrears outstanding from previous years of drought. The increase of £141,500 in Customs has accrued at the ports of Calcutta, British Burmah, and Madras, and not at Bombay. The trade in piece-goods, however, was not flourishing, and the sale of these goods for the markets in the interior had not been favorable to importers. It was a matter of regret that the increase of revenue did not indicate a corresponding improvement in trade.

The increase of £144,510 in the Post Office was wholly nominal.

The increase of £269,226 in miscellaneous receipts arose from a large item of assets of the Amoy Fund at Bombay being credited to Government. The increase of £163,775 in army receipts was owing to general augmentation under a variety of heads. There were, on the other hand, some instances of diminution, such as the decrease of £105,000 in assessed taxes. This meant that the 3½ income-tax was estimated to yield £2,150,000, and was now estimated to give £2,075,000. The falling off chiefly arises from the circumstances of the tax-paying classes having been less favourable than had been expected. However the out-turn for the year promised to be satisfactory. The Government had constantly observed the complaints that had been made regarding the assessment of the impost, and they had done all in their power to prevent just cause of complaint from arising. They could not hope that such causes would not occur, but it was noteworthy that on a circular being addressed by them to the several local Governments in India, enquiring whether there were any known cases of oppression, they received replies from all of them (except the Government of Bengal) to the effect that no such cases were known. The Government of Bengal, indeed, did transmit a resume of some thirteen cases; this number is of course a matter for much regret, though relatively it was not large.

Salt, again, showed a decrease of £72,870, which was however counterbalanced by a decrease in the charges of £82,519. Less salt had been manufactured and sold than was expected at the Sambhur Lake in Rajpootana.

Another item of decrease was that of £107,670 in the Mint receipts. Very little bullion had during the year been presented for coinage, owing to the unfavourable state of the exchanges.

A further item of decrease was £129,280 in the forest receipts. This arose from the consumption of timber by the railways having been less than was expected.

The net result was an income of upwards of fifty-one million pounds sterling, exclusive of net railway traffic receipts, which amount if compared with corresponding amounts of previous years, transcend them all, and is the largest revenue ever yet raised in British India.

The ordinary expenditure of the year was estimated in the budget at £49,316,145; it is now estimated at £50,051,800, showing a difference against them of £735,655.

The heavy increase (besides the minor items of increase) of £414,908 in the miscellaneous heading arose chiefly from what was technically called loss by exchange.

A new item would be perceived in the regular estimate which was not entered at all in the budget, namely, that of allotments for provincial services, £200,000. This entry appears for the first time. It relates to the scheme set forth in the Resolution of December last, entrusting to local Governments increased financial control in certain departments. In order that the local Governments may be able to inaugurate this plan successfully, it was found most desirable to give them a special allotment of funds to begin with, in addition to the regular allotment they will receive year by year for the next and subsequent years. It had been decided to make the special allotment from the resources of this year; and to fix the amount at £200,000, to be distributed rateably among the local Governments.

The increase of £554,659 under the head of army has arisen partly in England and partly in India. The increase in England amounts to £361,859, and in India to £192,800. The increase in England was in overland transport charges, in furlough allowances, and for breach-loading arms. The increase in India was due to the adjustment this year of a large sum on account of the charges for the overland troop transports defrayed in past years in India, which it was thought had been included in the home accounts. But for this arrear adjustment, the net charges for the army in India would have been less than was originally estimated by about £300,000.

The third item of increase was that of £319,517 under guaranteed interest in railway capital less net traffic receipts. This arose from the net traffic receipts having fallen off; they were estimated at £2,948,470; they are now estimated at £2,630,700. This diminution was owing to the decrease of traffic earnings.

So much for the increases. On the other hand, there was a long list of diminutions arising partly from estimates having been prudently framed, partly from savings having been effected; these range at amounts from £500 to £100,000, and occur under the heads of Interest, Refunds, Land Revenue, Forests, Excise, Assessed Taxes, Customs, Mint, Telegraph, Administrations, Minor Departments, Law and Justice, Police, Marine, Education, Ecclesiastical, Stationery and Printing, Allowances under Treas-



the ordinary expenditure of the year 1870-71, was chiefly due to delay in the completion of the Oudh and Rohilkund line. The ordinary expenditure was estimated to be about £40,000 to the completion of the line. To this had been added an amount of £40,000 to the completion of the line.

The saving of £141,750 under Railways, was chiefly due to delay in the completion of the Oudh and Rohilkund line.

The extraordinary expenditure £3,062,500, or 3 millions, were estimated to be spent, but only £1,146,800, or about 11-7th millions had been actually disbursed. The difference was largely accounted for by the unavoidable delay in prosecuting the railway works, by reason of the pending questions relating to the gauge best suited for adoption. The extraordinary added to the ordinary expenditure made up a total of £51,198,800, or 511-5th millions.

Such were the figures for the current year 1870-71, so far as they were yet known.

He would remind the Council that the figures of the regular estimate were liable to modification by reason of the facts which may come out in the course of the remaining two or three months. They must not therefore be surprised if the final result of the year differs considerably even from the revised estimate now presented.

In regard to the (perhaps unfortunately) cardinal importance of the revenue to the general finance, it would be advisable to consider what would have been the situation had the opium income of £1,074,519 not accrued. Why, the consequence would have been that, apart from the exceptional allotments of £200,000 to the local Governments wherewith to begin the provincial service scheme, and of £40,000 to the trustees of the Indian Museum, he should have that day shown a surplus of £162,581, or almost exactly the sum originally estimated, viz., £163,440. This proves the necessity of the financial measures proposed in the last exposition.

When he said this the mind of the Council would revert to the enhancement in the rate of the income-tax. He apprehended that in some quarters it would be held that the present anticipation of a considerable surplus proved that the increased rate of income-tax was after all not necessary, but he could not in the least degree admit such an argument. The matter turned on this question—was the opium estimate in the budget a fair and prudent one according to the knowledge available at the time? If that estimate was fair and prudent, then there was no ground for impugning the justice and necessity of the enhanced income-tax.

He considered that if the opium estimate was proved to have been reasonable, then any attack on the financial necessity of the enhanced income-tax for the year must inevitably fail. Now, what were the circumstances under which the opium estimate was framed? It was in 1870-71 that there had been a heavy fall in the price of Bengal opium; that for a whole year the decline had been almost regular and constant, and that the tendency was still downwards. He would affirm that when the Bengal estimate was produced, it was considered not at all too low, but quite high enough in non-official circles, where practical knowledge was in this respect most available. As regards the Malwa opium, the facts were almost as unfavourable, and he would repeat that without the income-tax at the 3½ per cent. rate, they must have produced a budget with a large deficit; and that therefore the imposition of that tax was a matter of financial necessity at that time.

As regards the surplus above shown for the current year, they must remember that it is only anticipated as probable, and not yet actually realized. It might even yet fail them more or less; but if it shall be fully sustained by the ultimate event, it will be most gratifying, and will occur indeed not at all before it is needed.

Before entering into details of the budget for 1871-72, he would draw the attention of the Council to an important modification in the form of the statement for that year. This modification had been made in order to give effect to the financial Resolution by the Government of India of the 14th December last. It will be remembered that by that resolution, an increased degree of control financially was accorded to the several local Governments in India in certain civil branches. It was to be hoped that this concession will give the local Governments an additional interest in the study and the enforcement of economy in expenditure; afford them a just inducement to supplement their local receipts from time to time by methods either most acceptable to the people, or least fraught with popular objection; cause a more complete understanding to arise between the executive authorities and the tax-paying classes respecting the development of fiscal resources; teach the people to take a practical share in provincial finance, and lead them up gradually towards a degree of self-government; and thus conduce to administrative as well as financial improvement. He was sure that the measure was advantageous to the imperial budget of British India.

The Council would perceive that the total amount of allotments for provincial services, as just defined, for all the local

Governments together, was set down in the expenditure side of the budget for the coming year at about 4½ millions, which amount he would explain further presently. He would observe that the total sum allotted for provincial services was thus distributed:—

	Receipts surrendered.	Assigned from Imperial Funds.	Total.
	£	£	£
India ... ..	8,500	26,700	35,200
Oudh ... ..	14,700	211,300	226,000
Central Provinces ... ..	24,000	268,600	292,600
Burmah ... ..	26,600	276,500	303,100
Bengal ... ..	264,900	1,197,900	1,462,800
North-Western Provinces ... ..	111,100	685,000	796,100
Punjab ... ..	67,400	528,600	596,000
Madras ... ..	81,800	752,300	834,100
Bombay ... ..	55,900	901,200	957,100
Total ... ..	657,500	4,799,300	5,456,800

Sir Richard then remarked upon these various allotments and upon the items of which they were severally made up.

He next explained at length the manner in which the regulation of the expenditure in these branches was to be confided to the local Governments subject to certain general conditions. In the Bombay Presidency the matter was still under consideration. In Bengal proper, the local Government was still in communication with the Government of India as to the best way of carrying out this decision. In the North-West Provinces, the Punjab, and Oudh, the local Governments had matured plans for provincial imposts, and bills to carry out these plans would be immediately submitted to the Council.

Sir Richard then proceeded to deal with the figures of the budget for 1871-72.

The receipts were taken at about 49 millions, as compared with the 51 millions of the year about to close. The main heads of receipt closely followed the regular estimate for 1869-70. The total value of the foreign trade was taken at 100½ millions sterling; an improvement was expected for the current year. There was a good prospect as to jute; cotton had fallen off slightly; coffee and indigo were also promising. As regarded the remission of the export duty on rice, he was not prepared in the present state of the finances to propose any change.

The opium estimate was taken at a little more than the amount which was received for the current year, or just over 8 millions gross. The precise number of chests to be sold in 1871-72 depended upon the number of chests which it may be resolved to offer for sale in the calendar year 1872, which again depended upon the out-turn of the crop now about to be gathered. The weather in the opium-growing districts of the Bengal Presidency was reported of late somewhat unfavorable. For the chests of 1871-72, an average price of Rs. 1,075 or £107-10s. per chest has been assumed. The average price per chest in 1870-71 had been Rs. 1,120-8, (£112-1s.). The prospects of the present crop in Malwa were reported excellent. For Malwa, the duty being fixed at Rs. 600 a chest, the real point for forecast was the number of chests likely to be exported. 90,000 had been estimated as the total chests for Bengal and Bombay.

The estimates of the Press, Telegraph, and Mint estimates were also noticeable.

There were decreases under the heads of Law and Justice, Police and Education, under the new local scheme.

The Post Office showed a decrease of £29,500.

The new telegraph rates had been so far successful as to cause an increase already of more than 50 per cent. in private telegrams; but it was not a financial success.

He now came to the ordinary expenditure of the year, estimated at about 49 millions, showing a reduction of £1,046,300. This was satisfactory.

There were various small increases under headings relating to the collection of the revenue, such as forests, excise, salt, and opium, which did not arise from any permanent accession to establishments, or such like expenditure.

There were other increases, such as those under Stamps and Stationery, Administration, Agriculture and Commerce, Printing Establishments, &c.

Decreases were shown under the heads of Law and Justice (£335,300), of Police (£2,269,500), of Education (£608,200), of Medical Services (£334,500), of Printing (£284,100), of Public Works, ordinary (£1,575,600).

The rate of exchange taken was 1s. 10½d. for the rupee, giving upon a supply of 9 millions sterling a nominal loss of £494,500.

The new head of allotments for provincial services (£4,799,300) comprised the imperial assignments made upon the basis of the grants of 1870-71, to the several local Governments in India for jails, registration, police, education, &c.

The expenditure for the army was set down at £15,084,000, showing a decrease of £316,000. Of this decrease, £170,000 occurred in India, and £75,500 in England.

A saving of nearly £70,000 by a reduction of five batteries of horse artillery and three garrison batteries had been estimated,

as also a reduction of £400,000 in the expenditure of the native army for this coming year. Public works ordinary expenditure amounted to 2½ millions. The 2½ millions now remaining under the general control of the Government of India consisted of—

Military ... ..	£1,012,500
Civil Buildings ... ..	150,700
Roads and Communications ... ..	116,900
Miscellaneous Public Improvements ... ..	25,600
Agricultural ... ..	454,900
Establishment and tools and plant ... ..	606,400
Total... ..	2,366,000

The net amount to be paid on account of guaranteed railway interests was upwards of 1½ millions.

Sir Richard then dwelt at length on the growth of the gross guaranteed interest.

Besides the ordinary expenditure, there was a proposed expenditure for Public Works extraordinary, of upwards of 3½ millions to be provided for from borrowed funds, bringing up the total expenditure, ordinary and extraordinary, to about 52½ millions.

The adoption of the comparatively narrow gauge would cause a large saving both in original outlay and in subsequent working charges.

Such, then, were the figures for 1871-72. On a comparison of income with ordinary expenditure, the result was an equilibrium, supported by a small surplus of £93,400. Assessed taxes on the receipt side of the budget for 1871-72 were set down at £600,000, which, as compared with the current year, shows a reduction in this taxation of £1,475,000. This was obtained by lowering the rate of assessment from 6 pies in the rupee, or 3½ per cent., to 2 pies in the rupee, or a fraction over 1 per cent., and by raising the minimum income liable to assessment from 500 Rupees to 750 Rupees; in other words, by exempting incomes below 750 Rupees.

He now passed on to the provision of ways and means, and to the cash balance account.

It was expected to commence the current year (1870-71) with a cash balance of 13½ millions, and to close it with a balance of 10½ millions. On closing the account, however, finally for the previous year, they found an actual cash balance at the commencement of the current year of nearly 14 millions, which improvement was due to the actual account of the previous year turning out more favourable than the regular estimate. It was expected that the current year, after its close, would leave a cash balance of about 16 millions, being 5½ millions better than the first estimate. Throughout the year the cash balances all over India had been very high.

As might be expected under all these circumstances the public credit, as proved by the prices of Government stocks, had, on the whole, been higher during the current year than it had ever stood before.

He would now advert to the loan arrangements for 1871-72.

Sir Richard then drew attention to the fast-growing interest on account of the borrowings of municipalities for reproductive works.

He next noticed certain remarks which had been made regarding the accounts of the Home Treasury of the Government of India which are kept in England. It had been said that the expenditure in England on account of India is incurred without sufficient reference to the authorities in India, and that the detailed accounts of it are not made known in India. This he showed not to be the case by a reference to the *Gazette of India*, in which the account had been regularly published.

He next noticed very briefly several measures which have been adopted in connexion with finance.

These embraced the Presidency Savings Bank at Calcutta and the district Savings Banks, under that name in the Madras and Bombay Presidencies.

The paper currency reserve for raising the limit from four millions to six, which bill had since passed into law, was then dwelt upon.

The money order system in India, in like manner, and the subject of the circulation of the new ten rupee gold pieces, were also noticed at length.

"Such, then, continued Sir Richard, 'is the exposition which I have this day to offer. The main points have been—

"That for 1869-70, instead of an anticipated deficit of £635,584 there has been an actual surplus of £118,668;

"That for 1870-71 the surplus estimated in the budget at £163,440 is now estimated at £997,100, or 1 million;

"That this surplus is really due to an unlooked for accession of opium revenue;

"That without this accession of opium revenue there would have been little more than an equilibrium between income and ordinary expenditure;

"That for 1871-72 there is estimated a small surplus of income over ordinary expenditure of £93,400;

"That this estimate is arrived at after a large abatement of the income-tax; the lowest incomes assessable, namely, those between Rs. 750 and 500 being exempted altogether, and the rates

for all classes being lowered from 2½ to a fraction above 1 per cent.;

"That this change in the income-tax causes a reduction of 1½ millions of direct taxation;

"That the exemption of incomes between 750 and 500 Rupees reduces the total number of persons assessed, 432,000, by fully one-half, and releases 240,000 tax-payers;

"That the ordinary expenditure for the coming year shows a decrease of one million of expenditure as compared with the current year;

"That, subject to certain conditions, an increased financial control has been entrusted to the several local Governments in respect of jails, registration, police, education, roads, other than military, and civil buildings;

"That the grants by the general Treasury for these services have been reduced by £331,038, and that a fixed limit is imposed on the imperial expenditure on these departments;

"That for these provincial services throughout India, allotments have been made of 4½ millions distributed among the various local Governments;

"That apart from the allotments made to the local Governments, under these provincial services for roads and buildings, the ordinary Public Works grant in India has been brought down to 2½ millions;

"That 3½ millions have been raised by loan in England since my last statement was made, while on a little above one million has been expended on public works extraordinary;

"That 3½ millions are proposed to be spent on Public Works extraordinary during the coming year 1871-72, 2½ millions being provided for by loan in England;

"That owing to the improvements in the account of the income and ordinary expenditure of Government, and the temporary diminution of expenditure on Public Works extraordinary, and on construction of the guaranteed railways, the cash balances in India are very high, and that no loan is proposed in this country;

"That during the current year various measures relating to finances have been carried out, such as the coinage of ten rupee and five rupee gold pieces; the legalization of a five rupee note in the paper currency; the introduction of district savings' banks in the interior of the country."

Sir Richard concluded an unusually elaborate address with some remarks upon the financial policy of the Government, upon the distinction preserved between various classes of expenditure, and upon the retrenchments made in the civil and military branches of expenditure.

#### PUBLIC WORKS—1870-71.

##### PROVIDED FOR BY LOAN.

Balance brought forward .....	£2,321,132
<b>LOANS RAISED.</b>	
ENGLAND—	
Proceeds of 4 per cent. Stock.....	£2,010,608
India Loan from the Maharajah Holkar for a State Railway .....	250,000
	2,260,608
<b>Deduct—</b>	
Debt paid in India .....	510,000
	1,750,608
<b>EXTRAORDINARY RECEIPTS—</b>	
Bombay Municipality .....	14,800
Madras East Coast Canals.....	1,000
Ootacamund Municipality.....	800
	16,100
	£4,067,336
<b>EXTRAORDINARY EXPENDITURE—</b>	
Irrigation Works, India .....	£206,000
England .....	1,200
	207,200
State Railways, India .....	£300,000
England .....	78,000
	378,200
<b>LOANS—</b>	
To Calcutta Port Trust .....	£25,000
Simla Municipality.....	5,000
Umrutur Municipality .....	22,500
Bombay Port Fund.....	170,100
Cawnpore Municipality .....	30,000
Nagpore Municipality.....	6,000
Madras Municipality .....	58,500
East Coast Canals, Madras, .....	2,000
Ootacamund Municipality.....	800
	315,900
	1,462,400
<b>Probable Balance to be carried to Account for 1871-72.</b>	<b>£2,605,936</b>
	<b>£4,067,336</b>

BUDGET ESTIMATE, 1971-72  
ENGLAND AND INDIA

Revenue and Receipts.	Actuals, 1969-70.	Budget Estimate, 1970-71.	Regular Estimate, 1970-71.	Increase.	Decrease.	Budget Estimate, 1971-72.	Budget compared with Regular.
	£	£	£	£	£	£	£
I.—Land Revenue ...	21,086,829	20,580,892	20,553,400	92,568	...	20,769,700	+56,800
II.—Tributes and Contributions from N. States ...	785,136	737,073	739,300	2,227	...	730,100	-9,200
III.—Forest ...	471,590	588,780	459,500	...	129,280	572,400	+113,900
IV.—Excise on Spirits and Drugs ...	2,255,197	2,285,000	2,387,600	72,600	...	2,351,100	-6,500
V.—Assessed Taxes ...	1,110,224	2,180,000	2,076,000	...	103,000	600,000	-1,475,000
VI.—Customs ...	2,429,185	2,416,500	2,558,000	141,500	...	2,558,800	-1,900
VII.—Salt ...	5,888,707	6,177,370	6,104,500	...	72,870	6,190,000	+85,500
VIII.—Opium ...	7,951,587	6,922,281	7,996,800	1,074,519	...	8,038,500	+41,700
IX.—Stamps ...	2,373,844	2,441,508	2,488,900	47,392	...	2,542,100	+53,200
X.—Mint ...	157,214	139,970	32,300	...	107,670	40,600	+8,300
XI.—Post Office ...	711,698	750,590	895,100	144,510	...	865,800	-29,500
XII.—Telegraph ...	257,134	193,008	226,200	33,144	...	245,800	+19,400
XIII.—Law and Justice ...	828,615	793,292	755,400	...	37,892	466,800	-288,800
Police ...	257,549	251,968	232,900	934	...	...	-252,900
XIV.—Marine ...	329,953	265,616	272,100	6,485	...	237,900	-34,200
Education ...	74,873	78,574	62,200	...	16,374	...	-62,200
XV.—Interest ...	375,698	365,321	354,700	...	10,621	339,900	-14,800
XVI.—Miscellaneous ...	1,525,769	737,874	1,027,100	289,226	...	928,300	-98,800
Army ...	48,860,789	47,885,862	49,211,000	1,905,045	479,707	47,416,300	-1,894,800
Public Works—Ordinary ...	1,082,605	736,225	903,000	166,775	...	819,000	-84,000
Public Works—Irrigation ...	189,155	117,870	117,600	...	270	109,900	-7,700
Railways ...	534,979	462,740	473,600	10,860	...	498,300	+22,700
	253,580	277,088	242,700	...	33,388	257,500	+13,800
<b>Total</b> ...	<b>60,901,081</b>	<b>49,479,585</b>	<b>51,048,900</b>	<b>2,082,680</b>	<b>513,365</b>	<b>549,098,900</b>	<b>-1,950,000</b>

Expenditure.	Actuals, 1969-70.	Budget Estimate, 1970-71.	Regular Estimate, 1970-71.	Increase.	Decrease.	Budget Estimate, 1971-72.	Budget compared with Regular
	£	£	£	£	£	£	£
1.—Interest on Funded and Unfunded debt ...	4,982,420	5,300,538	5,295,800	...	4,738	5,372,000	+76,200
2.—Interest on Service Funds and other Ac- counts... ..	627,267	614,002	545,500	31,498	...	528,100	-17,400
3.—Refunds and Drawbacks ...	465,094	400,000	238,600	...	61,400	336,000	-2,600
4.—Land Revenue ...	2,458,389	2,497,612	2,410,100	...	87,512	2,530,600	+120,500
5.—Forest ...	313,477	437,540	386,000	...	51,540	451,100	+63,100
6.—Excise on Spirits and Drugs ...	255,628	288,994	273,800	...	15,694	294,700	+21,400
7.—Assessed Taxes ...	41,701	59,100	43,700	...	15,400	43,400	-300
8.—Customs... ..	181,456	189,214	185,000	...	4,214	193,400	+8,400
9.—Salt ...	391,485	499,019	416,500	...	82,519	462,700	+46,200
10.—Opium ...	1,820,683	2,013,110	2,065,000	51,890	...	2,102,900	+37,900
11.—Stamps and Stationery ...	274,160	245,440	243,900	...	1,540	255,500	+11,600
12.—Mint ...	101,164	95,908	66,600	...	29,308	71,700	+5,100
13.—Post Office ...	688,483	729,583	775,500	45,917	...	755,100	-20,400
14.—Telegraph ...	553,401	589,719	537,100	...	52,619	515,500	-21,800
15.—Administration ...	1,389,875	1,400,601	1,363,000	...	37,601	1,437,200	+74,200
16.—Minor Departments ...	234,680	239,167	218,900	...	20,267	235,600	+16,700
17.—Law and Justice ...	2,902,926	3,009,432	2,962,400	...	47,032	2,427,100	-635,300
Police ...	2,435,131	2,319,964	2,369,500	...	50,464	...	-2,289,500
18.—Marine ...	1,291,571	784,100	733,700	...	50,400	777,800	+44,100
Education ...	627,184	680,530	606,200	...	74,330	...	-806,300
19.—Ecclesiastical ...	161,083	169,795	153,600	...	16,195	164,900	+11,300
20.—Medical Services ...	487,047	503,654	505,200	1,546	...	170,400	-334,800
Printing... ..	214,382	222,279	200,500	...	21,779	...	-200,500
21.—Political Agencies ...	405,897	313,675	328,000	14,325	...	299,900	-28,100
22.—Allowances and Assignments under Treaties and Engagements ...	1,863,615	1,787,090	1,729,900	...	57,190	1,720,800	-9,100
23.—Superannuation, Retired and Compassionate Allowances ...	1,332,515	1,376,253	1,458,900	82,647	...	1,425,700	-33,200
24.—Miscellaneous ...	1,059,838	985,192	1,400,100	414,908	...	1,192,700	-207,400
25.—Allotments for Provincial Services*	...	...	200,000	200,000	...	4,799,300	+4,599,300
Army ...	27,561,332	27,651,511	27,712,500	842,731	781,742	28,564,100	+851,600
Public Works Ordinary ...	16,329,739	15,745,341	16,300,000	554,659	...	15,984,000	-316,000
Railways ...	5,034,566	3,998,400	3,940,800	...	57,800	2,365,000	-1,675,600
Guaranteed Interest on Railway Capital, Less Net Traffic Receipts † ...	309,712	363,710	222,000	...	141,710	235,500	+13,500
	1,547,064	1,557,183	1,878,700	819,517	...	1,856,900	+19,800
Public Works Extraordinary ...	50,782,413	49,316,145	50,051,800	1,716,907	981,252	49,005,500	-1,046,300
	2,699,614	3,062,300	1,146,800	...	1,915,500	3,026,000	+2,479,200
<b>Total</b> ...	<b>53,382,027</b>	<b>52,378,445</b>	<b>51,198,600</b>	<b>1,716,907</b>	<b>2,896,752</b>	<b>52,631,500</b>	<b>+1,432,900</b>
Surplus Excluding P. W. Extraordinary ...	118,668	163,440	297,100	...	...	93,400	...
† Guaranteed Interest ...	4,176,006	4,405,352	4,467,400	...	...	4,638,600	...
Net Traffic Receipts... ..	2,628,944	2,848,170	2,590,700	...	...	2,781,700	...
Guaranteed Interest, Less net Traffic Receipts...	1,547,064	1,557,183	1,876,700	...	...	1,856,900	...

\* The following are the Services for which these Allotments are made:—Jails, Registration, Police, Education, Medical Services, Printing, Petty Construction and Repairs (excepting in the Salt and Opium Departments), Roads other than Mails, Civil Buildings, and Miscellaneous public Improvements.

*Estimated Receipts and Payments in England and India during the year 1870-71.*

Receipts.	England.	India.	Total.	Payments.	England.	India.	Total.
	£	£	£		£	£	£
1. Opening Balance .....	2,892,483	13,940,451	16,832,934	11. Ordinary expenditure ..	8,302,900	39,373,251	47,676,151
2. Ordinary Income .....	209,700	80,539,200	81,048,900	12. Guaranteed Interest on			
3. Net Railway Traffic Receipts .....	...	2,530,700	2,530,700	Railway Capital .....	4,370,000	37,000	4,407,000
4. Deposits repayable and Advances recovered, &c. ....	...	13,835,300	13,835,300	13. Extraordinary Expenditure .....	51,800	1,095,000	1,146,800
5. Local Remittances .....	...	701,000	701,000	14. Deposits repaid and Advances recoverable, &c. ....	...	15,538,200	15,538,200
6. Remittance Account .....	129,000	1,458,500	1,587,500	15. Local Remittances .....	...	331,000	331,000
7. Abyssinian Expedition .....	134,800	10,000	144,800	16. Remittance Account .....	1,087,800	282,500	1,370,300
8. Bills of Exchange and Specie Remittances .....	9,000,000	...	9,000,000	17. Abyssinian expedition .....	800	12,500	13,300
9. Railway Capital .....	6,832,000	...	6,832,000	18. Bills of Exchange and Specie Remittances .....	...	9,525,000	9,525,000
10. Borrowed .....	2,010,600	4,080,100	6,070,700	19. Railway Capital .....	5,385,000	1,487,600	6,872,600
				20. Debt paid .....	...	2,811,500	2,811,500
				21. Closing Balance .....	2,010,283	16,012,051	18,022,334
Total .....	21,208,583	87,373,251	108,581,834	Total .....	21,208,583	87,373,251	108,581,834

*Abstract of the above showing how the Ways and Means of the year are estimated to be provided.*

Surplus in ordinary account, including railway transactions	897,100	Cash balance increased .....	1,189,400
Local Remittances .....	70,000	Extraordinary expenditure .....	1,146,800
Remittances .....	217,100	Bills of Exchange .....	625,000
Abyssinian Expedition advances recovered .....	181,500	Deposits repayable and advances recovered .....	1,683,100
Borrowed .....	3,159,200	Railway Capital Expenditure in Excess of receipts .....	20,600
Total .....	£4,574,900	Total .....	£4,574,900

EDWARD GAY,  
Deputy Compt. Genl. of Accounts.

HUGH SANDEMAN,  
Offg. Comptroller General of Accounts.

R. B. CHAPMAN,  
Offg. Secy. to the Govt. of India.

*Estimated Receipts and Payments in England and India during the year 1871-72.*

Receipts.	England.	India.	Total.	Payments.	England.	India.	Total.
	£	£	£		£	£	£
1. Opening Balance .....	2,010,283	16,012,051	18,022,334	11. Ordinary expenditure ..	8,124,800	39,023,800	47,148,600
2. Ordinary Income .....	163,000	48,935,900	49,098,900	12. Guaranteed Interest on			
3. Net Railway Traffic Receipts .....	...	2,781,700	2,781,700	Railway Capital .....	4,600,000	38,000	4,638,000
4. Deposits re-payable & advances recovered, &c. ....	...	17,876,300	17,876,300	13. Extraordinary expenditure .....	389,500	3,236,500	3,626,000
5. Local remittances .....	...	134,800	134,800	14. Deposits repaid and Advances recoverable, &c. ....	...	18,327,900	18,327,900
6. Remittance Account .....	74,000	1,411,300	1,485,300	15. Local Remittances .....	...	152,100	152,100
7. Abyssinian Expedition .....	5,000	5,000	10,000	16. Remittance Account .....	1,194,700	273,200	1,467,900
8. Bills of Exchange .....	9,000,000	...	9,000,000	17. Bills of Exchange .....	...	9,000,000	9,000,000
9. Railway Capital .....	4,672,000	...	4,672,000	18. Railway Capital .....	1,985,000	1,834,700	3,819,700
10. Borrowed .....	2,500,000	1,067,000	3,567,000	19. Debt paid .....	5,000	1,205,800	1,210,800
				20. Closing Balance .....	2,125,283	15,121,251	17,246,534
Total .....	18,424,283	88,223,851	106,648,134	Total .....	18,424,283	88,223,851	106,648,134

*Abstract of the above showing how the Ways and Means of the year are estimated to be provided.*

Surplus in ordinary account including Railway transactions	293,400	Extraordinary expenditure .....	3,626,000
Cash balance reduced .....	775,900	Deposits repayable and advances recovered .....	451,000
Remittances .....	18,400	Local Remittances .....	87,500
Abyssinian Expedition advances recovered .....	10,000		
Railway Capital receipts in excess of expenditure .....	853,300		
Borrowed .....	3,365,300		
Total .....	£4,505,100	Total .....	£4,505,100

EDWARD GAY,  
Deputy Compt. Genl. of Accounts.

HUGH SANDEMAN,  
Offg. Compt. Genl. of Accounts.

R. B. CHAPMAN,  
Offg. Secy. to the Govt. of India.

**PUBLIC WORKS—IRRIGATION.**

**IRRIGATION: EFFORTS IN THE UPPER DOOAB.**

The Upper Doab was once the paradise of Hindoostan. From the foot of the Himalayas, where Akbar built his summer palace, and drew forth the pure mountain torrent like the Jewish law giver, from the desert rocks down to Meerut, Surdhuha, Kotana, Baghpat, and Ghazeeabad, the nobles of the Moghul Court had their country seats, their shooting grounds, their mosques, bazars, and walled towns. In this favoured region, with two noble rivers to drain the soil, and sweet water in every well rising to a reasonable distance from the surface, the land brought forth her increase; and, an occasional irruption from the Sikhs excepted, agriculture and prosperity were uninterrupted. This state of things, impaired by the weakness of the Mohammedan Government, was restored in some measure by the adventurers who settled there under the Mahrattas; and it long survived the introduction of European administration after the victorious campaigns of Lake. Ere long however, the old canals of the Emperor were restored, and the lands along the Jumna soon became water-logged by the west of water due to a vicious system of levels, and to the interception of the transverse drainage by which the engineering of nature had been wont to carry off the surface water into the channel of the Jumna. A saline efflorescence appeared upon the fields; fever and enlarged spleens became epidemic. These startling hints, however were not taken. The canal paid, not only as an insurance against famine, to be reasonably employed by the State land-lord when the rains and springs of nature failed but to be sold across the counter to an increasing population greedy of sudden gain. A second, and still larger canal was next opened at the head waters of the Ganges, so as to do for the eastern borders of the Doab what had already been done for the west; and optimist administrators and engineers drank each other's healths at Roorkee under the cordial congratulation of that great material reformer, the Marquis of Dalhousie.

How stands the matter now?

"The general excess of irrigation, and its extraordinary excess in the new rice lands, has resulted in raising the spring level, and continuing for a series of years, has gradually converted the formerly dry land between the Ganges and the Jumna, at places of wide extent, into a moist terra land, and now the trees grow there with the large trunks and wide-spread foliage of a damp forest country. The water in the old wells is from 30 to 40 feet in depth. The water holes which used to be dry for many months in the year now always contain water, low land, which used sometimes to be swampy, has now much extended in area, its swampy nature become permanent and crops of a marvellous height and thickness cover the land."

The result of which is, that while there were about nine thousand deaths from malarious fever in 1866, 10 in 1867, and 11 in 1868, the death-roll from this cause alone shewed over twenty-one thousand in the year under review.

If any other proof were needed that this calamity has been created by the injudicious zeal of British officials, it is to be found in the fact that the mortality in the two months of October and November, when the strong sun of that region is drying up the waste surface-water, was over twelve thousand, while in the two dry months of February and March it was only three thousand. These figures include all kinds of death, for the monthly returns are unclassified; but if the steamy months shewed four times as many deaths, from all causes as were shown by the dry months, we may be sure that the proportion would not be less for fever alone. Taking indeed this aspect of the figures as presented for the entire year, it will be found that in the two districts of Saharunpore and Mozuffurnuggur, where this extravagant saturation has been permitted out of an aggregate mortality of thirty-five thousand, no less than twenty thousand were from this one cause! In other words, upwards of sixty per cent. of the deaths were due presumably to causes not only controllable, but actually created by the alacrity of the administration to meet the covetousness of the people. In Dr. Planck's words—"deaths from fever in these districts show a determined tendency to increase as years of differing climate succeed each other." From which we cannot but infer that, as we have shown above, "some special cause must be at work," and he believes "that no remedies against this prevalence will be of permanent benefit, except a lessened amount of irrigation and a better preparation of the sites of centres of population as places of residence for the people." We are happy to observe that these views have been cordially adopted by the Government. In a few straight forward sentences, wholesomely free from the mannerism and vagueness of official verbiage, Mr. Elliot observes that an inquiry is now on foot into the relations of irrigation with drainage, and the sanitary condition of the country. Dr. Planck is requested to aid in the investigation, and "further remarks will be delayed until the results are received."

Let us hope, that the deliberations of the committee, to whom

this task has been entrusted, will be thorough, impartial, and productive of action. Then will a great reproach be taken away from the administration of British India, and a new era commence from the measures inaugurated *convoite Plance*.

It is when we turn to the head of fever that the most startling proof is found of the need for a thorough and earnest action on the part of the local Government. In 1869 there were about five hundred and thirty thousand registered deaths out of a population of under thirty millions, being about seventeen per thousand against ten recorded in the previous years. Out of this great increase the largest advance was no doubt due to cholera and small-pox; but then these disorders, as we have seen, present certain compensations, the one in its intermittent habits, the other in its known amenability to prophylactic measures. But fever, the number of whose victims rose in the proportion of 24 to 17, seems to be steadily increasing its ravages, and to be allowed to do so without any clear perception of how they are to be checked. And, were it not for the fact that its local distribution shows how much it is due to controllable causes, we hardly know what more awful prospect could be in store for a country than to find such a disorder settling down to permanent and progressive occupation of its soil. Setting aside Bundelkand as a God-forgotten land, where a mephitic virus is breathed out of the lungs of mother earth over which man can only win tardy and uncertain conquests by the spread of tree and crop cultivation, we find in Saharunpore and Mozuffurnuggur alone ample food for the most serious reflection.—*Pioneer*.

**SANITATION OF THE UPPER DOOAB.**

It may be remembered that in noticing Dr. Planck's report a few weeks ago, we drew attention to the rapid depopulation that was going on in the districts of Saharunpore and Mozuffurnuggur, and expressed a hope that some remedial measures might result from the proceedings of the mixed Committee their sitting, or just risen, at Meerut.

The papers connected with the subject are now before us, and they fully justify our complaints and, to some extent at least, our hopes. It is clear, on the one hand, that the evil had not been exaggerated. The mortality from malaria, which formerly increased at a slow rate, has continued for the last two years to advance in geometrical progression. The committee have recorded their opinion that "the prostration of the labouring classes from repeated attacks of fever has \* \* \* enervated and weakened them to a degree which in frequent instances has interfered with the timely sowing of the winter-crops and the reaping of the autumn harvest." That this new and artificial endemic has been created by causes due to the action of the British Government, the Committee were right not to positively assert, for reasons which we shall presently see; but the tenor of their proceedings, and of the able and earnest note appended to the report by Colonel W. Greathed, is enough to sanction the assumption that this is in fact the case.

The committee have done all that was entrusted them to do. They were instructed in a memorandum by the Lieutenant-Governor, under date the 19th October last, to discuss the subject, with a view of ascertaining "what steps are feasible for maturing a general drainage scheme to benefit both districts;" and so far from stopping short of their instructions they actually went beyond the letter, however, they may have conformed to the spirit of the memorandum, for it is remarkable that the Government of the North-Western Provinces only dropped the faintest hint that irrigation might, by any possibility, have a share in the evils to be inquired into, whereas the proceedings of the Conference and the Chief Engineer's note combine in giving to this cause a most noticeable prominence.

The former document commences in these words—"Colonel Greathed represents that it is proposed by the Irrigation Department to appoint officers to examine the amount of irrigation in over-irrigated villages, and to reduce it to an extent which shall prevent any water-logging both on the eastern Jumna and Ganges canals." Lower down again we find the Chief Engineer informing the Committee, "that it is under discussion in the Irrigation Department to stop or check irrigation when the water in wells is within ten or twelve feet from the surface in any period of the year;" on which the committee record "their opinion of the extreme importance of this measure." (para. 4.) Appended to those proceedings, as we have said, is a Minute by Colonel Greathed in which the subject is dealt with in detail. Here, after laying out the work for drainage operations, it is added (para. 5)—"It will be necessary in the first instance to examine all villages suspected of being water-logged or over-irrigated, \* \* \* to measure their irrigation, and to reduce it where necessary within reasonable compass."

On receipt of these papers the local Government acted with the same promptitude that has characterised all its more recent proceedings. By a Resolution, dated 23rd November, His Honor the Lieutenant Governor recorded "his concurrence in the proposals made by the Chief Engineer for carrying out the objects contemplated by the Conference, and desired that immediate effect might be given to them."



For has the Government of India been backward. Whenever the evils shown can be safely traced to the action of the Irrigation Department, that department will be charged with the expense of redress. In other cases the remedies will be applied from local funds to be aided by loans, and perhaps by grants, from the Imperial Budget. All this is very satisfactory—by far the most cheering feature being the candour and earnestness displayed by Colonel Grested, the Chief of the Irrigation Department. Had that department shown any jealous desire to exonerate itself, and to make use of technical jargon in order to confuse the issues of fact, there is no doubt that serious obstructions might have been raised, which would have deferred the necessary measures for an indefinite time; and time in such a case is not merely money, but human happiness, and health, and life. From the revelations made by Dr. Cutcliffe, and later by Dr. Planck, it is quite evident that the saturation of the Upper Doon has been rapidly bringing that once-favoured region into the condition of a *terai*, where, as at the foot of the Nepal and Bhootan Hills, a few half-poisoned wretches scrape a precarious subsistence out of the sites of extinct cities, and defend it with difficulty against the wild beasts who share with them the occupation of the ruins.

That this saturation is caused by the Government canals is clear from two considerations. It cannot be attributed to any other known cause, and it extends with the extent of irrigation. The way in which this has come about is three-fold. The canals when out of soil, form a bank which intercepts the natural outfall of the country. They likewise, whatever be their level, silt up and damage the drainage channels, while by percolation they raise the water-table of the surrounding lands and fill the wells with water charged with organic and mineral impurities. And, lastly, from vices in the system of distribution, they furnish inducements to the cultivators to waste the water and "slop" it about the lower levels, while the uplands continue insufficiently watered, or perhaps entirely dry.

In the two former classes of evil, long and careful engineering operations will be needed before we can congratulate the public of those parts upon the attainment of a perfect cure; in the meantime, the papers before us show that the work is beginning in the right way. But for the last no suggestion is yet known to have been made. To Colonel Strachey and his gifted brother—the consistent and reasonable promoters of all sound material reform—we must now look to prevent the great blessing of irrigation from being turned into a curse. Let the pressure which it desires and expects be put upon the local Government, and its conduct up to the present point affords hopeful omens that some strenuous effort will be made. The object should be to introduce such a method of supply as shall make it the direct interest of the agriculturists to take as little water as may consist with true farming, instead of, as now, rivalling each other in corrupting the lower canal officials, that each may get more than his neighbour. Until this is done, it is obvious to any one who will attentively study the medical reports, that our brothers' blood will continue to cry against us out of the ground.—*Pioneer*.

## PUBLIC WORKS—RAILWAYS.

### OPENING OF THE OOMRAWATTEE SECOND STATE RAILWAY.

"FAIR OOMRAWATTEE," decked in her holiday attire and with her flowing snowy-white cotton locks waving in the breeze, was a sight well worth the witnessing on Thursday last, the 16th ultimo. On that auspicious day the fair city was wedded by bonds of iron to our western capital, or in other words, the branch line of railway which connects the cotton capital of the Berars with the main line of the G. I. P. R., has been successfully opened. This large and important cotton mart had long felt the want of proper communication. It is owing chiefly to the untiring energy of Mr. Carnac, Cotton Commissioner of the Central Provinces and Berars, ably backed up by the zeal of Colonel Nembhard, the Commissioner of East Berar, that this desideratum has now been supplied. At 11 o'clock on the 16th, a large number of European and Native gentlemen assembled in a field adjacent to the Mofussil Press and Ginning Co.'s factories, which is the site fixed for the railway terminus. The Oomrawattee police force, under their Superintendent, here formed a guard of honor. When the key was placed in its proper position by the Superintending Engineer, Hyderabad P. W. D., he delivered a beautifully got-up hammer to the Commissioner of East Berar, Colonel Nembhard, who, with two smart strokes, drove the key home, and the deed was done. The train then passed on to the station-site, and the Commissioner declared the line open. Three hearty cheers were then given for the Queen and the successful accomplishment of the affair. The police guard at the same time ordered arms and saluted the passing train. Almost all the European gentlemen present, and many of the Natives, were then invited to enter the train, which, with its heavy freight, traversed the whole line to Budnait junction and back speedily and safely. A number of fog signals which were laid on the line exploded, on the train starting, with delightful regularity.

That part of the ceremonial having been successfully concluded, upwards of fifty gentlemen repaired to the sudder station Cutcherri, where a splendid luncheon was laid out for them. Ample justice was done by one and all to the good things supplied without stint. Many ladies from Oomrawattee and the out-stations graced the table with their presence.

### PROPOSALS RELATIVE TO THE LOCATION OF THE CARWAR RAILWAY.

Extract from a letter from Major E. O. S. Williams, R.E., Deputy Secretary to the Government of India P. W. Dept., to the Secretary to the Government of Bombay P. W. Dept., Railway Branch, dated 17th January 1870.

REFERRING to my telegram\* of the 3rd instant, and to your letter No. 2173, dated the 18th November 1869, and Secretary of State's despatch to the Government of Bombay, No. 47, of the 4th idem, I am directed to state that, under the present circumstances of the case, the Government of India considers it best that the Government of Bombay should at once order the commencement of the surveys it thinks necessary to complete the information which is required to admit of a final conclusion being come to on the location of the line of railway from Carwar towards Hooblee.

I am to add that the Government of India has very little doubt that this line should be on a narrow gauge, and the survey should therefore contemplate such a line, and be suited to the narrower formation, which would in that case be sufficient, and the sharper curves which with the use of bogie trucks may be adopted. The Government of India would further be disposed to regard a ruling gradient of 1 in 40 as quite sufficiently good for locomotive power, and the question of adopting steep inclines with fixed engines at the Ghats should be carefully considered as suggested by Colonel Trevor. A very large traffic can certainly be worked in this way without difficulty. It is supposed that the heavy traffic will chiefly be down the incline, so that the objection to their being somewhat steep is much lessened.

The Government of India considers, on the information now before it, that the system of railways in the southern portions of the Deccan, extending even to Bangalore, should all be on a narrow gauge; and having in view the eventual development of such a system of lines, it seems desirable to locate the Ghat section in the way likely to be most suitable and convenient for the whole system rather than for any mere communication to Hooblee, or any other specific locality. The engineers should therefore generally consider, in connexion with the present enquiry, what might probably be the direction of such lines in the vicinity of the junction at Hooblee or elsewhere.

It should be borne in mind that the first essential in the preparation of this project is that it shall be shown to be financially successful. If the goods likely to be carried at the rates that could properly be charged are not likely to cover the necessary outlay and interest on capital in a reasonable time, the Government of India could not assent to the prosecution of the work at present. There can be little doubt that a far better prospect of financial success will be obtained by a narrow gauge line than a broad one in this case. Under any circumstances, however, the works both on the Ghat and on the lines in the Deccan leading to it will be heavy, and the cost of a narrow gauge line will probably be much less than that of a broad gauge, provided the system of a narrow gauge line is extended, as the Government of India has no doubt it should be, into the cotton-producing districts, for which Carwar is to be the outlet, the question of break of gauge will not in practice arise as regards the essential traffic to be dealt with.

On the whole, the Government of India is disposed to assent to the views indicated in paras. 17 and 85 of Colonel Trevor's report on the subject of the line best calculated to serve the interests of the cotton trade, and on the question of hauling the traffic over the Canara Ghats by means of fixed engines; and to regard with favour Major Goodfellow's proposal for carrying the line by the south, instead of the north bank of the Gungavally River, the requirements of the Hooblee and Dharwar being met by a transverse line of railway to the north, which might be eventually extended to Belgannu, Kolapoor and Sattara, so as to join the Great Indian Peninsula Railway at some suitable point east of Poona. The line from Bunkapoor towards Guduk might be made to serve for a junction with Bellary, and a line to the south from Bunkapoor could connect the Carwar line with Mysore.

Colonel Trevor's conclusions in para. 42 of his report that the line from Shulapoor to Bunkapoor would be a more remunerative undertaking for Government, and more advantageous to the general public, but would not be as beneficial to the cotton interest as a railway from the cotton districts to Carwar,

\* Arrange at once for completion of survey for railway from Carwar to Hooblee or other suitable place to be carried out under Bombay Government. Work to be suited to a narrow gauge. This arranged in communication with Governor of Bombay.

do not seem to be based on a sufficiently large view of the question. No doubt in the early question were a single line to join Hooblee at Bunkapoor, with the sea on one side, and the Great Indian Peninsula Railway at Sholapur on the other, the conclusion of Colonel Trevor that the latter is preferable in view of the general convenience of the community, irrespective of the cotton trade, may be sustained. But it does not seem right to the Government of India to deal with the question in this partial manner, and the future extension of lines in connexion with the approach to the harbour of Carwar is an essential consideration.

Having overcome the expected difficulties of the Ghat, it is manifest that a new highway for the export by sea of all produce from the centre of the Indian Peninsula is given, and it is in this light that the new line of railway should be chiefly viewed, and not as a mere local convenience.

In conclusion, I am directed to communicate for information copy of a memorandum, in which are embodied the general views of the Government of India on the subject of the character of the new lines of railway to be carried out by the State.

From Col. M. K. Kennedy, R.E., Secretary to the Government of Bombay, Railway Department, to the Officiating Secretary to the Government of India, P. W. Dept., dated 5th December 1870.

With reference to your No. 100, of the 17th January last, I am directed to submit, for the information of the Government of India, the result of last season's work on the location of the Carwar railway, and of the conclusions which have been arrived at therefrom by this Government. The operations of the survey parties were principally confined to the endeavour to obtain a better line than Mr. Buchanan's by the Arhyle Ghat route, and to obtain a new line by the Wuddy Ghat, as suggested in para. 7 of letter from the Government of India under reply.

Mr. Shaw also examined the Kyga Ghat, and country below the Barbully; but finding the country above and below the former would require heavier works than by the Arhyle route, that in the latter there would be a very difficult ascent to make, and that in both cases the line would run into Carwar in a most inconvenient manner, did not consider it worth while to prosecute the surveys of these passes. In this conclusion this Government concur.

On the Arhyle line the trace below the Ghat has been much improved. The principal point to ascertain, however, was the respective merits of the Arhyle and Wuddy Ghats, and the following data have been obtained, from which a comparison can be made:—

	Arhyle Ghat.		Wuddy.	
	M.	Chs.	M.	Chs.
Total length is ...	9	48	10	54
Rise of ...	1,291 feet		1,432 feet.	
Average grade ...	1 in 39		1 in 39	
	Chs. L.		Chs. L.	
Gradients ...	1 in 30	173 36	134	0
	1 in 31	...	128	75
	1 in 32	...	38	50
	1 in 33	110 5	...	...
	1 in 35	254 20	260	35
	1 in 36	...	92	65
	1 in 39	...	52	40
	1 in 40	42 35	...	...
	1 in 50	17 10	...	...
	1 in 60	2 0	...	...
	1 in 70	109 25	...	...
	1 in 104	...	62	0
Level	46	27	26	55
1 in 431	20	...	58	80

The respective length of grades, therefore, of 1 in 40 and under, are on Arhyle 560 chains, Wuddy 707 chains.

The largest continuous heavy grade of 1 in 35, and under, is on—

	Arhyle.	Wuddy.
	222 Chs.	462 Chs.
Earth-work ...	In favour	
Ballast ...		
Retaining walls ...		
Permanent way ...		
Bridges and Culverts ...		
Rock ...	In favour of	
Tunnelling ...		
Viaducts ...		
	Five 10 feet.	Ten 10 feet.
Principal Bridges at 10 feet and over are.	One 20 " ... Two 15 " semi.	Two 30 " ... Three 40 " ... One 50 " ... One 60 " G. ... One 50 "
Total running feet of waterway, including culverts and Gungawully	473	628

Accepting Mr. Shaw's quantities on the two Ghats, but adopting higher rates in some instances than those given by him, the respective cost will be as follows:—

Arhyle.	Rs.
276, 908 C. yds. Earth-work, at 9½ as.	5,64,194
9 M. 48 chains Ballast, at Rs. 7,000	67,200
Bridges, Culverts	2,06,395
16,119 Cubic yard. " " " " " " " "	44,327
2,046 L. yds. retaining walls, at Rs. 50	1,02,300
9 Miles 48 chains permanent way, at Rs. 20,000	1,92,000
88 L. yds. tunnel, at Rs. 274	24,112
Total	12,08,488
Add 10 per cent. contingencies	1,20,042
	13,20,470

#### Wuddy.

	Rs.
1,029,356 C. yds. earth-work, at 9½ as.	5,93,840
10 M. 54 Chs. Ballast, at Rs. 7,000	74,725
Bridges, Culverts	4,18,100
Laterite, 24,248, at Rs. 1	24,248
2,640 L. yds. retaining walls, at Rs. 50	1,32,000
10 M. 54 chains permanent way, at Rs. 20,000	2,18,500
Gungawully, 10 spans of 90 feet, at Rs. 400 a running foot	3,00,000
Total	13,16,418
Add 10 per cent. contingencies	1,31,641
	14,48,059
	13,20,470

Difference in favour of Arhyle ... 6,77,564

Say, with extra length of fencing, side ditches, &c., 7 lakhs.

The principal points that were urged in favour of the Wuddy over the Arhyle were as follows:—

- 1st.—That it would probably prove more healthy.
- 2nd.—That an easier and cheaper line would be obtained.
- 3rd.—That it would be preferable for the cotton trade to take the line to Guduk via Sirci and Bunkapoor, than via Yellapoor and Hooblee.

With regard to the 1st point, Mr. Shaw reports that "at the conclusion of the Wuddy Ghat survey on the 18th June, out of a survey party of 7 Europeans and 3 Natives, 6 Europeans and 2 Natives were sick, and the coolies also suffered severely."

With regard to the 2nd point, actual survey has shown that an easier and cheaper line is obtainable by the Arhyle line, which also avoids an expensive crossing over the Gungawully river, and has the advantage of a made road in close proximity the whole way.

With regard to the third point, the Government of India having declared the line to Carwar down the Ghat was to be regarded not as a local convenience, but as an outlet to a new seaport of the product of the centre of the Indian Peninsula, and having also stated that lines are to branch off from it to north to Belgaum, Kolapoor, &c., to the south to Bangalore, and to the coast to Bellary, it is obviously desirable that a large centre of trade, likely Hooblee, should be selected as the converging point of these several lines instead of a small village like Bunkapoor. A line from Bunkapoor to Guduk would run for half its length through Native States, while a line from Hooblee to that town would pass exclusively through British territory and it does not appear that the former, as regards the cotton traffic, would have any advantage over the latter.

The above points having been taken into consideration, this Government have finally determined in favour of the Arhyle Ghat route, and Mr. Shaw has been directed to complete the survey from Carwar to Guduk, laying out the line between Yellapoor and Hooblee, with a view to a branch to Bunkapoor.

The result of the changes on the Arhyle Ghat route may be summed up as follows:—

- 1st.—The length of the railway has been increased from 5½ to 6½ miles.
- 2nd.—The ruling gradient on the Ghat is now 1 in 30, instead of 1 in 17.
- 3rd.—The ruling gradient on the remainder of the line has been lowered from 1 in 60 to 1 in 85.
- 4th.—The curves have been sharpened from a minimum radius of 12 to 4½ chains.
- 5th.—The length of the tunnelling has been reduced from 3,019 to 396 lineal yards.
- 6th.—The average depth of earth-work is now 9, instead of 10½ feet.
- 7th.—The cost of carrying out the work is reduced by about 10 per cent.

The mileage cost of a 2 feet 6 inch gauge railway, with curves of minimum radius of 4½ chains, as far as it can now be arrived at, will probably be £10,000. It is probable that this average may be still further reduced by a reduction of the gauge to 2 feet 2 inches, by reducing the curves to a minimum of

3 chains, and by the extensions proposed over the easier country above the Ghats.

In para. 25 of Colonel Trevor's printed report, the net profits are calculated at Rs. 6,000 per mile, without taking into account the indirect profits alluded to in his para. 26. It is therefore considered that the financial prospects of the line are sufficiently encouraging to render the active prosecution and completion of the survey both advisable and important.

*From Major E. C. S. Williams, R.E., Deputy Secy. to the Govt. of India, P. W. Dept., to the Secy. to the Govt. of Bombay, P. W. Dept., Railway Branch, dated 13th January 1871.*

I am directed to acknowledge the receipt of your letter No. 1586, dated the 5th December last, summarising the results of the last season's surveys of the alternative routes for the railway from Carwar to the Deccan near Dharwar, and intimating that the Government of Bombay prefer the Arbye Ghat route, and have issued instructions for the completion of the survey from Carwar to Guduk, the line between Yellapoor and Hooblee being laid out with a view to a branch at Bunkapoor.

The previous reports submitted to the Government of India leave little room for doubt that Hooblee with its 50,000 inhabitants, probably the most populous town in the Deccan south of Poona, and the centre of a large and valuable trade, should be on any line of railway constructed in this district. Dharwar with its 30,000 inhabitants also has strong, though secondary, claims. Bunkapoor is a large village, but a place of no trade. The best New Orleans cotton is grown in its vicinity, but the growers find their market at Coompta and not at Bunkapoor, which, equally with Hooblee and Dharwar, is on the margin of the cotton-field. Some extension into the heart of the cotton-field, perhaps to Guduk, may, therefore, be proper, but the alignment of an eastern extension should not be made without reference to a future connection with the Madras Railway system.

The north and south line of the Southern Mahratta Railway will probably pass from Mysore through Bunkapoor, Hooblee, and Dharwar. Wherever, then, the point of junction with the Carwar line may be, Bunkapoor, as well as Hooblee, will, sooner or later, be included within the railway system, and it is important that the least amount of line in the aggregate shall be constructed. In this view the minor proposal of the Bombay Government to deflect towards Turrus the line between Yellapoor and Hooblee commends itself for adoption as an advantageous deviation from the direct line via the Arbye Ghat, the general conclusion of the Bombay Government in favour of which is accepted by the Governor-General in Council, in so far as the information placed before the Government of India allows of an independent judgment of the merits of the two lines.

The question as to the method of working by a fixed incline and what Ghat is best suited for that, is not touched upon, but the ascent to the top of the Wuddy is 141 feet higher than to the summit of the Arbye Ghat. The former is upwards of 1 mile longer, and has  $1\frac{1}{4}$  mile more of gradients under  $1/40$ . The terminus inland, whether Bunkapoor or Hooblee, is, however, considerably higher than the summit of either Ghat, so that this concentration of ascent by the Wuddy Ghat might, other things being equal, prove an advantage. The Government of India would wish to see the sections last run by the Arbye and Wuddy Ghats, the former via Yellapoor, the latter via Sirci and Bunkapoor, and I am directed to request that they may be forwarded

### BENGAL FISHERIES.

We understand that an important economical question has been raised with regard to Indian fisheries. In a fluvial province like lower Bengal, fish is one of the most valuable resources of the country. It is, in fact, almost the only animal food which the religious prejudices of the higher ranks, and the poverty of the lower classes, have left within the reach of the Hindoo. Beef and fowls he cannot touch; mutton or goat flesh is beyond the income of nine out of every ten families in the province. Yet a rice-eating people requires in a special degree some condiment consisting of animal food. From the days of Homer, the vegetarian peasantry of Southern Europe have seasoned their farinaceous diet with salt fish. In Bengal, every rivulet, water-channel, tank, and marsh, is made to contribute its quota of minnows or prawns, and a scarcity of fish tells very severely upon the health and strength of the husbandmen in any district in which it takes place.

Yet it seems indubitable that Bengal is now threatened with a permanent fish famine. No province seems so capable of defying mismanagement and reckless slaughter of the finny tribes, consisting, as it does, of three great deltas, each of which spreads out an endless network of rivers, channels, marshes, and lakes. There is, in the first place, the delta of the Brahmaputra, with its feeders from the Assam and the Cachar valleys, and their innumerable bifurcations and lake-like swamps. There the population is still comparatively sparse, and the supply of fish unlimited. Proceeding westward to the Gangetic delta, we find the tanks and water-courses less fruitful, the larger fish exhausted, and the fishermen compelled to have recourse to a smaller

mesh net in order to earn a livelihood. We speak at present of those castes who fish, not from boats, but on the banks of rivers and tanks; in short, within their depth. In the western districts of Bengal, the change becomes more and more marked, and miserable minnows form the peasants' staple supply of fish. But it is in the third delta, that of the Mahanadi, in which the evil attains its climax. The Mahanadi, and its distributaries have recently been examined by a specially qualified officer, and the result leaves no doubt that Orissa is now practically being denuded of wholesome fish. The tanks, swamps, and minor channels, have lost all their larger varieties, and the fishermen now live by catching the small fry of the large estuary fishes. These fishes come inland to spawn, and no sooner are the eggs hatched than the miserable little swarms are caught by the all-devouring Uriya net. As the fish famine becomes more and more severe, the fishermen go on decreasing the size of the mesh of their nets, until at length nothing can escape them. In this way, millions of small fry are massacred every month, each one of which, had it been allowed to find its way down into the estuary, would have grown into a fine fish, and returned in due course, according to the laws of its nature, to the inland streams.

Many of these facts have long been known to Indian naturalists. The question is, how to remedy the evil? The damage proceeds in some districts from causes within the control of Government. Irrigation weirs, unless furnished with adequate machinery, prevent the access of the fish to the upper parts of the rivers; and, as a matter of fact, in the next delta down the coast, that of the Godavery, many fine fisheries were thus destroyed. This deficiency has now been remedied, and Surgeon Day's inexpensive system of fish ladders has rendered irrigation absolutely innocuous to the fish. In Orissa the great weirs or anicuts are furnished with flood-gates, which furnish a free passage for the finny tribes. Care ought to be taken however that these passages are kept open, and not turned into vast traps, at each side of which the fishermen lurk for their prey. But the only real remedies for the wholesale destruction of fish are unfortunately of a much less simple character. Three different systems have been proposed. The first is that Government should resume the fisheries, and either grant them or let them out to individual persons or communities, whose self-interest would thus be enlisted in maintaining the value of their individual fisheries, and in preventing the wholesale extermination of the fish. The fishing castes are perfectly alive to the damage which the destruction of the small fry causes; and in the Madras districts, where the fisheries have thus been let out, each little community is most vigilant in preserving the value of its fishery farm. Such a scheme however would involve an amount of Government interference which could not be conveniently ventured upon in Bengal.

The second remedy is the enforcing of close seasons. No doubt the small fry of the larger fishes could be protected in this way; but this, too, would necessitate a great deal of vexatious intermeddling with what the people have always been accustomed to consider as one of their rights. Nor would it be possible to effect much good by this means, unless the close season was extended over a very large part of the year. To protect even a single fish, certainly the most valuable one—the hilsa—the close season would have to extend over an aggregate of nine months in the different presidencies. The hilsa breeds at different seasons in the northern rivers and the southern ones, and again at different seasons in the rivers of eastern and of western India. Putting together all the different months in which the small fry would require protection in the various provinces, an aggregate of nine has been ascertained to be required. If efforts were also made to protect the other varieties of valuable fish, the close season would be still further extended. Nor have we at present a sufficient knowledge of the habits of Indian fishes to be able safely to say when the close season should begin, and when it should end, in each separate district. We only know that the close season would have to be fixed during different months in different parts of the country, and the remedy would involve a very great hardship among the fisher castes, who would thus be thrown out of work during several months of each year.

The third and most practicable scheme appears to consist in the regulation of the size of the meshes of the nets. Wherever fish is scarce, the mesh is decreased, so as to catch what was formerly allowed to escape. The fishermen of Orissa complain that, as they have contracted the size of the mesh, the fisheries have become less productive, and their fortunes have declined. In truth, the one is a corollary of the other. As the large fish disappear, the fishermen try to eke out their livelihood by catching the small fry, and, once the massacre of the small fry begins, the total extermination of the large varieties is only a question of time. The size of the mesh is most carefully regulated in England, and the small fry are protected by severe penal restrictions. We propose on a subsequent meeting to consider how far such a system could be safely applied in India. Meanwhile, the facts before us leave no doubt that both Orissa and Bengal are being drained of one of the most important of their natural resources.



## THE PUBLIC REVENUE AND EXPENDITURE.

Revenue and Expenditure of the Government of India for the first nine months of the year 1870-71, as compared with the corresponding period of 1869-70.

Revenues and Receipts.		April to Nov. 1869.	April to Nov. 1870.	Increase.	Decrease.	Expenditure.	April to Dec. 1869.	April to Dec. 1870.	Increase.	Decrease.	
		£	£	£	£		£	£	£	£	
Land Revenue		12,336,400a	12,375,230a	41,830	...	Interest on Funded and Un- funded Debt	1,981,158	2,106,237	122,784	...	
Tributes, &c., from Native States		453,440	580,106	73,766	...	Interest on Service Funds and other Accounts	582,654	349,441	...	33,213	
Forest		276,233	247,164	...	29,069	Refunds and Drawbacks	207,697*	255,129*	...	12,568	
Excise on Spirits and Drugs		1,623,767	1,733,006	109,239	...	Land Revenue	1,683,230	1,668,215	...	15,015	
Assessed Taxes		686,177b	1,404,103b	765,926	...	Forest	208,996	273,058	68,072	...	
Customs		1,685,645	1,840,584	174,939	...	Excise on Spirits and Drugs	177,173	326,570	48,897	...	
Salt		4,154,140	4,466,221	312,081	...	Assessed Taxes	23,364	32,468	4,104	...	
Opium		5,935,125	5,980,752	...	4,378	Customs	136,335	138,728	2,393	...	
Stamps		1,673,408	666,053	...	1,007,360	Salt	291,424	273,772	...	17,652	
Mint		123,331	27,079	...	96,252	Opium	140,924	1,706,309	214,382	...	
Post Office		469,635	623,069	132,434	...	Stamps	...	42,784	...	32,866	
Telegraph		180,897	177,025	46,126	...	Mint	64,820	44,210	...	20,610	
Law and Justice		697,848	1,339,500	1,141,652	...	Post Office	488,608	373,174	...	15,429	
Police		201,162	191,708	...	9,459	Telegraph	292,898	380,770	...	62,133	
Marine		128,425	174,057	45,632	...	Administration	868,486	844,683	...	23,803	
Education		59,160	49,252	...	9,908	Minor Departments	167,559	148,441	...	9,118	
Interest		257,899	222,710	...	35,189	Law and Justice	2,111,814	2,176,500	64,686	...	
Miscellaneous		596,342	436,232	...	160,110	Police	1,789,573	1,667,404	...	122,169	
						Marine	312,502	279,939	...	32,563	
						Education	464,610	437,059	...	27,411	
						Ecclesiastical	119,395	113,052	...	6,333	
						Medical Services	335,962	354,893	18,901	...	
						Stationery and Printing	179,866	165,158	...	14,223	
						Political Agencies	284,962	191,505	...	92,857	
						Allowances, &c., under Treaties & Engagements	949,122	972,138	23,016	...	
						Miscellaneous	434,357	616,007	181,650	...	
						Superannuation, &c., Al- lowances	494,075	523,998	29,913	...	
Total		31,444,084	32,935,939	2,843,615	1,351,710	Total	16,122,072	16,306,372	724,278	537,978	
		From April to	Nov. only.				From April to	Novem- ber only.			
Army Miscellaneous		603,295	550,405	...	52,890	Army	8,329,035	7,811,341	...	517,694	
Public Works Ordinary.	Miscellaneous	95,885	88,983	...	6,502	Public Works Ordinary.	Public Works	3,604,309	2,218,624	...	1,385,685
	Receipts ...						Railways			...	
	Railway Ex- change, Gain	296,245	92,785	...	203,460		Guaranteed.	44,141	55,019	10,878	...
	State Rila- ways Traffic						Railway Ex- change, Loss.	213,223	84,195	...	129,028
Do. Extraordinary	Receipts ...	6,690	3,543	...	3,147	Do. Extraordinary—Irri- gation, &c.	599,231	416,496	...	182,735	
Capital Account	do	...	2,875	2,875	...	State Railways	19,107	143,534	124,427	...	
Total Revenues		32,445,649	33,974,480	2,846,490	1,617,709	Total Expenditure	28,983,903	27,042,546	861,763	2,753,120	

a Includes Irrigation receipts in the Public Works Department up to November only.

(b) Includes Income Tax realized in the Military and Public Works Departments up to November only.

\* Includes Refunds in the Military and Public Works Department up to November only.



**STATEMENT showing the Amount of each kind of CURRENCY NOTES of the BOMBAY CIRCLE in circulation on the 28th day of February 1871.**

Date.	Denomination of Notes.						Total Value.
	10 Rs. Value.	20 Rs. Value.	50 Rs. Value.	100 Rs. Value.	500 Rs. Value.	1,000 Rs. Value.	
<b>1870.</b>							
15th December...	27,82,780	15,02,500	20,79,100	55,77,700	22,46,500	2,69,59,000	4,11,47,560
31st December...	27,12,550	14,75,060	20,22,000	54,09,300	22,61,000	2,71,76,000	4,10,55,910
<b>1871.</b>							
22nd February ..	26,83,090	14,20,620	20,77,100	51,41,200	19,21,000	3,14,68,000	4,47,05,950
28th February...	26,37,490	13,94,200	21,30,350	49,97,300	19,17,000	3,19,70,000	4,50,46,340

**STATEMENT of the amount of INDIAN GOVERNMENT CURRENCY NOTES IN CIRCULATION of the amount of COIN and BULLION RESERVE, and of the GOVERNMENT SECURITIES held by the Department of Issue of Indian Paper Currency.**

Date.	Circles of Issue.	Balance of Issue Account.	Retired by other Offices of Issue.	Currency Notes in circulation.	Silver Coin Reserve.	Silver Bullion Reserve.	Gold Bullion Reserve.	Reserve in Government Securities.	Total Reserve.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
31st Jan., 1871...	Calcutta ..	3,93,17,370	1,67,020	3,91,50,850	*1,26,86,796	85,08,488	3,12,495	1,42,42,231	3,07,50,010
	Ditto ... Madras ...	1,00,12,610	10,69,180	89,43,430	57,48,316	...	...	17,28,404	71,76,720
	Ditto ... Bombay ...	4,38,83,460	46,09,220	3,91,84,240	2,67,87,238	16,15,371	...	1,81,49,861	4,15,52,470
	Ditto ... Allahabad ...	94,46,110	28,09,960	65,76,150	72,32,609	...	...	11,03,231	89,35,980
	Ditto ... Lahore ...	67,39,380	31,03,190	36,36,190	54,85,783	...	...	7,00,037	61,35,820
	Ditto ... Calcut ...	16,27,870	6,54,410	9,73,460	13,11,161	...	...	1,00,069	14,11,220
	Ditto ... Trichinopoly ...	21,09,480	17,06,430	4,03,050	17,86,891	...	...	1,00,069	18,86,950
	Ditto ... Vizagapatam ...	5,45,340	2,01,330	3,44,010	3,17,821	...	...	5,47,902	4,17,880
	Ditto ... Nagpore ...	34,81,080	1,00,300	32,80,780	27,38,898	...	...	5,00,106	32,86,800
	Ditto ... Kurrachee ...	47,32,290	22,35,980	24,96,310	41,97,454	...	...	...	49,97,560
	Ditto ... Akola ...	26,83,930	1,18,730	25,65,200	16,01,780	...	...	...	16,01,780
	<b>Total</b> ...	<b>12,44,78,920</b>	<b>1,69,25,750</b>	<b>10,75,53,170</b>	<b>6,98,44,807</b>	<b>51,23,859</b>	<b>3,12,495</b>	<b>3,22,72,009</b>	<b>10,75,53,170</b>

**SILVER received and coined in the MINTS of CALCUTTA, MADRAS, and BOMBAY, 1870-71.**

	CALCUTTA.			MADRAS.			BOMBAY.		
	Bullion or Coin received during the month valued in Rupees.		Coined and examined during the month valued in Rupees	Bullion or Coin received during the month valued in Rupees.		Coined and examined during the month valued in Rupees.	Bullion or Coin received during the month valued in Rupees.		Coined and examined during the month valued in Rupees
	Govt.	Merchants.		Govt.	Merchants.		Govt.	Merchants.	
July.....	1,201	2,722	9,30,351	...	3,594	...	88	1,03,558	26,51,675
August.....	66,565	2,020	...	...	644	...	...	43,631	11,23,598
September.....	39,122	3,28,445	...	...	...	...	40,524	49,655	3,38,585
October.....	8,487	2,12,373	...	...	3,803	...	8,241	1,09,248	1,53,625
November.....	520	59,349	...	...	3,806	...	1,41,504	92,117	...
December.....	2,000	1,81,929	...	...	...	...	...	1,61,541	...

**CASH BALANCES in the GOVERNMENT TREASURIES in INDIA, 1870-71 contrasted with previous Years.**

	July.	August.	October.	November.	December.	Jan. 1871.
	Rs	Rs	Rs	Rs	Rs	Rs
Government of India .....	1,52,43,515	1,36,15,865	1,47,55,373	1,83,59,723	1,99,80,320	2,84,14,697
Bengal.....	1,23,40,473	1,12,23,907	1,23,20,478	1,21,74,892	1,38,42,355	1,75,89,650
British Burmah.....	28,44,725	32,10,150	41,59,849	36,45,337	31,82,587	21,54,993
North-Western Provinces .....	2,39,69,426	2,14,98,002	1,52,06,179	1,96,74,077	2,34,75,303	2,86,61,640
Ondh.....	62,19,612	53,75,649	39,55,325	47,42,276	54,40,441	65,27,100
Punjab.....	1,17,81,232	1,08,05,965	83,31,333	92,46,874	1,11,29,599	1,11,97,672
Bombay.....	3,05,03,255	2,35,10,012	1,83,78,648	1,83,67,691	1,79,41,554	2,36,81,651
Central Provinces.....	63,53,106	61,53,053	56,31,686	56,53,447	61,08,780	78,77,193
Madras.....	3,07,95,345	2,75,09,862	2,43,76,457	2,56,50,415	2,09,76,113	2,85,64,842
	<b>14,00,50,689</b>	<b>12,29,02,765</b>	<b>10,73,15,388</b>	<b>11,75,12,372</b>	<b>12,84,73,346</b>	<b>15,27,03,438</b>
The same month 1868-69.....	<b>11,00,92,330</b>	<b>9,63,10,342</b>	<b>7,89,69,348</b>	<b>7,15,32,402</b>	<b>8,01,62,355</b>	<b>87,68,640</b>
Ditto 1869-70.....	<b>10,94,54,805</b>	<b>10,02,40,204</b>	<b>7,04,14,121</b>	<b>8,14,11,652</b>	<b>977,02,951</b>	<b>11,83,90,970</b>

## THE BANK OF MADRAS.

STATEMENT OF AFFAIRS.				25th Feb. 1871.				30th Feb. 1871.			
THE NEW BANK OF BOMBAY.				STATEMENT OF AFFAIRS.				STATEMENT OF AFFAIRS.			
THE BANK OF BENGAL.				LIABILITIES.				LIABILITIES.			
28th Feb. 1871.				25th Feb. 1871.				30th Feb. 1871.			
Rs.				Ra.				Ra.			
A. P.				A. P.				A. P.			
Proprietors' Capital, paid up				Proprietors' Capital, paid up				Capital			
2,20,00,000 0 3				2,20,00,000 0 3				55,95,000 0 0			
Reserve Fund				15,66,639 7 3				Public Deposits at Head Office			
15,66,639 7 3				4,36,01,599 11 4				42,19,781 8 8			
General Treasury Balance				1,36,63,316 4 1				Do. at Branches			
4,36,01,599 11 4				3,25,32,095 5 6				Other deposits at Head Office and Branches			
Ditto				4,51,340 6 9				1,14,80,118 4 4			
Other Deposits at Head Office and Branches				6,06,920 6 9				2,54,508 6 4			
Bank Post Bills, &c.				10,22,41,564 13 6				1,51,580 5 7			
Sundries				Total Ra. ...				5,63,500 0 0			
Total Ra. ...				Assets.				Reserve Fund			
10,22,41,564 13 6				Government Securities				1,02,583 5 0			
Loans on Government Securities				1,24,26,633 12 0				Rest			
Office and Branches				56,49,161 3 9				Total Ra. ...			
do.				23,27,147 6 0				3,90,77,276 0 8			
Accounts of Credit on				1,56,58,076 14 0				Assets.			
do.				11,80,234 7 10				Silver and Notes at Head Office			
Dead Stock				14,654 2 0				30,55,391 1 8			
Stamps				5,09,075 5 0				Silver and Notes at Branches			
Balances with other Banks				1,73,181 5 1				97,57,879 9 1			
Sundries				2,27,37,304 4 9				Government Securities			
Cash and Currency Notes at Head Office				3,75,66,046 0 1				8,83,710 0 0			
Cash and Currency Notes at Branches				Total Ra. ...				31,93,080 3 9			
Total Ra. ...				10,22,41,564 13 6				Securities			
10,22,41,564 13 6				Total Ra. ...				17,66,288 3 0			
				Total Ra. ...				Loans at Head Office and Branches			
				Total Ra. ...				7,07,510 0 0			
				Total Ra. ...				Accounts of Credit at Head Office and Branches			
				Total Ra. ...				64,80,081 3 0			
				Total Ra. ...				Dead Stock at Head Office and Branches			
				Total Ra. ...				2,54,508 3 11			
				Total Ra. ...				Bills of Exchange			
				Total Ra. ...				16,86,610 10 8			
				Total Ra. ...				Due by other Banks			
				Total Ra. ...				3,73,614 0 0			
				Total Ra. ...				Total Ra. ...			
				Total Ra. ...				2,90,07,276 0 8			

Government Promissory Notes enforced for Payment of Interest in London, under deduction of Amount re-transferred to India, and Outstanding in the Books of the Bank of Bengal.

Particulars.	4 per cent. Loan.				4½ per cent.		5½ per cent. Loan of 1859-60	5 per cent. Debentures for				Total Amount.			
	of 1833-33		of 1835-36		of 1842-43.			of 1854-55		Transfer of 1861-57			Transfer Loan Jan.-1st 1870		
	of 1834-34	of 1834-35	of 1835-36	of 1842-43.	of 1854-55	of 1856-57									
30th June 1870. ...	53,100	94,133	2,146	20,821	34,406	600	1,51,02,600	1,39,82,900	1,39,72,500	14,500	46,22,700	3,03,700	5,74,02,800	4,29,28,800	16,40,12,713
30th July 1870. ...	53,100	94,133	2,773	20,60,480	41,11,800	1,49,64,000	1,23,64,000	1,53,05,600	14,500	46,50,900	2,52,700	5,69,16,600	4,32,06,800	16,50,92,256	
31st August 1870.	53,100	94,133	2,773	20,60,480	41,14,200	1,50,24,400	1,23,05,700	1,65,85,700	14,500	47,21,500	2,46,200	5,76,46,500	4,41,02,800	16,53,98,958	
30th Sept. 1870. ...	53,100	94,133	2,347	20,54,614	42,06,200	1,51,31,600	1,24,03,300	1,72,67,700	14,500	47,94,300	2,25,100	5,54,23,000	4,52,18,300	17,16,01,458	
31st Oct. 1870. ...	53,100	94,133	2,347	20,54,614	42,11,700	1,53,35,300	1,24,27,600	1,83,32,400	14,500	48,05,000	2,03,300	5,57,81,000	4,53,50,000	17,50,13,994	
30th Nov. 1870. ...	53,100	94,133	2,347	20,52,904	42,62,000	1,53,61,100	1,25,12,000	1,98,77,600	14,500	48,20,500	1,35,700	5,52,13,300	4,76,20,000	17,78,74,288	
31st Dec. 1870. ...	53,100	94,133	2,347	19,59,463	41,43,100	1,52,55,100	1,23,79,500	1,83,26,100	14,500	48,78,100	87,700	5,56,27,700	4,88,75,900	17,80,14,048	
28th Feb. 1871. ...	53,100	94,133	2,347	19,58,935	41,45,000	1,52,22,200	1,23,95,000	1,84,22,500	14,500	48,84,500	82,700	5,59,10,100	4,86,76,500	17,83,40,315	

## THE INDIAN MONEY MARKET.

## CALCUTTA SHARE LIST.

## BOMBAY SHARE LIST.

Species	Paid up.	Last year's Divid.	Quotations	BANK.	Shares.	Noml Value, per Sh.	Paid up.	Last Div'd.	Rate share
<b>BANKS</b>									
Agri Bank, Limited, A.	210	1 1/2 p c	100 a 112	Agri Bank	100,000	100	all	5 p c	86
Ditto, new contributory A.	10		100	Bank of Bengal	25,000	1,000	all	5 p c	1,375
Ditto B. Shares	415			Bank of Bombay (New)	10,000	500	all	5 p c	691 1/2
Agri Bank, Ltd.	100	5 p c	120 a 180	Bank of Madras	10,000	500	all	5 p c	1,500
Alahabad Bank, Limited	100	5 p c	120 a 180	Chartered Mercantile of I. L. and	5,250	1,000	all	12 p c	240
Bank of Bengal	1000	2 1/2 p c	1850 1390-1390	Chartered Bk. of I. & C.	40,000	200	all	5 p c	180
Bank of Calcutta, Limited, A.	384	3 p c	30 a 35	India	27,000	250	all	5 p c	115
Ditto	80	3 p c	30 a 35		10,000	250	all	12 p c	440
Bank of Upper India	50	5 p c	61 a 63						
Bank of London Bank, Limited	250	1 1/2 p c	140 a 145	<b>RAILWAY COMPANIES</b>					
Mussonie Savings Bank	100	5 p c	125 a 140	G. I. P. R. Co. Consolidated Stock	250	218-5-5		5 p c	387
National Bank of India	212 1/2	2 1/2 p c	104 a 109	Do New 2 1/2 shares	30	1 1/2-5-5		5 p c	125
Oudh United Service, Limited	100	5 p c	18 1/2 a 20	Do New 2 1/2 shares	100	1 1/2-5-5		5 p c	1,100
Punjab Bank, Limited	500	5 p c	145 a 160	Do New shares	18	195-5-1		5 p c	200
Union Bank (Agri)	100	5 p c	90 a 91	<b>LAND COMPANIES</b>					
United Bank of India	100	5 p c		Elphinstone Land	10,000	1,000	all	5 p c	165
<b>COMMERCIAL COMPANIES</b>				Ditto New Issue	10,000	1,000	all	5 p c	165
Beerham Coal Co., Limited	1000	nil	390 a 400	Masoonie Land and R	750	3,000	all	5 p c	275
Ditto	200	nil	80 a 82	Port Canning	4,000	3,000	all	5 p c	1,510
Bengal Coal Co., Limited	100	5 p c	140 a 145	<b>PRINTING COMPANIES</b>					
Bombay Warehouse	445	20 p c	630 a 555	Albion Press Co	150	5,000	2,500	50 p c	3,300
Burton's Press Co., Limited	30	5 p c	170 a 175	Albion Press Company Kurvaohes	100	5,000	1,100	50 p c	775
Burdon Stone Co., Limited	100	5 p c	8 a 12	Alexandra Press Co.	25	8,000	800	50 p c	470
Calcutta Docking Co., Limited	700	nil	270 a 280	Apollo Press Co.	150	12,000	11,000	50 p c	7,300
Ditto New Shares	384	nil	135 a 140	Bombay Press Co.	200	2,000	all	50 p c	1,300
Delhi Railway Co.	218-2-10	2 1/2 p c	225 a 230	Ditto (New)	200	2,000	all	50 p c	1,300
Eastern Bengal Indigo Co.	100	nil	24 a 21	Colaba Press Co.	100	2,000	all	50 p c	1,300
Eastern Bengal Railway	218-2-10	2 1/2 p c	225 a 230	East India Press Co.	100	2,000	all	50 p c	1,300
Railway Steam Tug Co., Limited	18-2-11	2 1/2 p c	240 a 250	Farmer Press Co.	300	2,000	all	50 p c	1,300
East India Railway Co.	250	5 p c	220 a 221	Hydraulic Press Co.	800	6,000	all	50 p c	1,300
Equitable Coal Co., Limited	200	5 p c	220 a 221	Kurvaohes Press Co.	1,000	6,000	2,000	50 p c	1,300
Goosery Cotton Mills Co.	1000	5 p c	1250 a 1300	Masoonie Press & Co.	2,000	4,000	500	50 p c	1,300
Gouropore Co., Limited	125	5 p c	102 a 101	Princes of Wales Press Co.	125	2,000	750	50 p c	1,300
Ditto Shares	250	5 p c	160 a 160	Victoria Press, Madras	220	2,000	750	50 p c	1,300
Great Eastern Hotel Co.	500	5 p c	160 a 160	<b>SPINNING &amp; WEAVING COS</b>					
Hutchinson Docking Co., Limited	1000	5 p c	160 a 160	Albert Mills Company	400	2,000	1,700	50 p c	1,300
Ditto	500	5 p c	160 a 160	Alliance Spinning Co.	500	2,000	all	50 p c	1,300
Ditto	500	5 p c	160 a 160	Bombay	100	5,000	all	50 p c	1,300
Loading and Shipping Co.	100	7 p c	38 a 49	Bombay United	1,800	15	150	50 p c	1,300
Nammyth's Pat. Press Co.	500	5 p c	700 a 700	Brook Mills	300	15	50	50 p c	1,300
Oriental Gas Co.	25	5 p c	65 a 70	Do New	300	15	50	50 p c	1,300
Ditto (Contributory)	41	5 p c	11 a 14	Do New	300	15	50	50 p c	1,300
Oudh and Rohilkund Railway	210	2 1/2 p c	108 a 107	Do New	300	15	50	50 p c	1,300
Port Canning Land Co.	1400	2 1/2 p c	270 a 270	Do New	300	15	50	50 p c	1,300
Punjab	420	2 1/2 p c	270 a 270	Do New	300	15	50	50 p c	1,300
R. Boot	350	2 1/2 p c	215 a 220	Do New	300	15	50	50 p c	1,300
Ti-hoot Indigo Limited	200	nil	50 a 50	<b>SHIPPING COMPANY</b>					
<b>TEA COMPANIES</b>		Yearly.		Bombay Shipping Co.	1,000	5,000	3,500	1,800	
Isam Tea Company	100	5 p c	210 a 213	<b>MISCELLANEOUS</b>					
Bengal Tea Co., Limited	100	5 p c	40 a 45	M. Humes' Building Co.	1,000	50	all	5 p c	30
Ditto (Contributory)	90	5 p c	18 a 20	Kurvaohes Land and Shipping Co.	500	2,000	500	21 p c	170
Bombay Tea Co., Limited	200	nil	145 a 151	Ti-hoot and Company	2,000	500	all	25 p c	415
Ditto (Contributory)	50	nil	90 a 95						
Central Cashier Tea Co.	200	2 p c	55 a 63						
Deking Tea Co. Limited	85	5 p c	14 a 15						
Dekhi Doon Tea Co. Limited	100	nil	10 a 12						
Durrung Tea Co., Limited	100	nil	30 a 31						
Eastern Cashier Tea Co.	100	R p c	92 a 91						
East India Tea Co., Limited	100	nil	25 a 26						
Jaldapour Cashier Tea Co.	450	5 p c	200 a 270						
Ditto	1000	nil	nominal						
Kurvaohes and Darjeeling Tea Co.	350	5 p c	60 a 61						
Ditto	200	5 p c	12 a 43						
Kutail Tea Co., Limited	50	nil	nominal						
Laver Assam Tea Co., Limited	90	nil	20 a 22						
Moucharra Tea Co., Limited	75	nil	nominal						
Moucharra Tea Co., Limited	250	nil	nominal						
Moucharra Tea Co., Limited	124	nil	nominal						
Moucharra Tea Co., Limited	21	nil	nominal						
New Gahat Tea Co.	30	15 p c	70 a 72						
New Gahat Tea Co.	10	nil	10 a 20						
Punjab Tea Co., Limited	10	nil	30 a 35						
Soom Tea Co., Limited	20	nil	90 a 40						
Tuckoo Tea Co., Limited	10	nil	10 a 12						
Upper Assam Tea Co., Limited	10	nil	nominal						
Victoria Tea Co., Limited	50	nil	nominal						

## EXCHANGE ON LONDON.

	CALCUTTA.
Bank Bills, at 6 months' sight	1-11 to 1s 11 1/2
Do at 3 months' sight	1 1/2
Do on demand, ditto	1 1/2
Credit Bills (at 3 months' sight)	1 1/2
Documentary Bills at 6 months' sight	1-11 to 1s 11 1/2

## BANK RATE OF DISCOUNT

Discount on Private Bills and Notes	5 to 6
Ditto on Acceptances of Local Banks	5 to 6
Int. on Loans on Security of Govt. Paper	4

## GOVERNMENT SECURITIES

	CALCUTTA.	BOMBAY.
Five and a half per cent.	113 1/2	113 1/2
Five per cent.	106 1/2	106 1/2
Four and a half per cent. (Public Works Loans)	107 1/2	107 1/2
15 years' Debenture Loans	110	108
10 years' do. do.	106 1/2	106
15 years' do. do.	106	104
4 1/2 per cent. Municipal Loans	110	114

## THE FREIGHT MARKET.

## CALCUTTA

BANKS	Date of Liquidation	Number of Shares	Amount paid up	Amount returned	Rate per Share
Bank of Bombay	Jan '86	200	500	75	80
Bank of China	Aug '86	40,000	200	150	1
Bank of India	Sept '86	20,000	200	35	6
Bank of Japan	Sept '86	20,000	200	40	15
Bank of Korea	Mar '86	40,000	200	2	1
Bank of Persia	Feb '86	25,000	200	18	14
Bank of Portugal	May '86	50,000	200	60	6
Bank of Russia	Apr '86	30,000	199	74	1
<b>COMPANIES</b>					
Bank of Bengal	Nov '86	1,000	3,500	4,375	10
Bank of Calcutta		500	3,500	2,440	10
Bank of India		5	5,000	2,400	10

## THE FREIGHT MARKET.

## CALCUTTA

BANKS	Date of Liquidation	Number of Shares	Amount paid up	Amount returned	Rate per Share
Bank of Bombay	Jan '86	200	500	75	80
Bank of China	Aug '86	40,000	200	150	1
Bank of India	Sept '86	20,000	200	35	6
Bank of Japan	Sept '86	20,000	200	40	15
Bank of Korea	Mar '86	40,000	200	2	1
Bank of Persia	Feb '86	25,000	200	18	14
Bank of Portugal	May '86	50,000	200	60	6
Bank of Russia	Apr '86	30,000	199	74	1
<b>COMPANIES</b>					
Bank of Bengal	Nov '86	1,000	3,500	4,375	10
Bank of Calcutta		500	3,500	2,440	10
Bank of India		5	5,000	2,400	10

## INDIAN SECURITIES.—LONDON.

Share	Par	INDIAN RAILWAYS.	Closing Prices January 26.	Closing Prices February 2.
100	100	Bombay, Baroda and Cen- tral India (gu. 5 per cent.)	108 to 104	108 to 10
20	20	Ditto Ext. do. Iss. at 15 p.m.	par to 1 prem	par to 1 prem
20	20	Do. do. ....	—	—
100	100	Eastern Bengal (gu. 5 p. ct.)	108 to 104	108 to 104
100	100	East Indian (gu. 5 p. ct.)	108 to 110	108 to 110
100	100	Gr. Ind. Peninsula (g. 5 p. ct.)	108 to 104	108 to 108
20	20	Ditto, New (gu. 5 p. ct.)	108 to 11 prem.	108 to 11 prem.
20	20	Ditto, New (gu. 5 p. ct.)	108 to 11 prem.	108 to 11 prem.
100	100	Carnatic (L), gu. 5 p. c.	100 to 101	100 to 101
20	20	Ditto, ditto issued at 15 p.m.	dis. to 1 prem.	par. to 1 prem.
100	100	Ditto, 4 per cent. deb. st.	87 to 88	87 to 88
100	100	Gr. South of India (g. 5 p. c.)	108 to 104	108 to 104
100	100	Ditto (4 per cent.)	98 to 97	98 to 98
100	100	Madras (guar. 5 per cent.)	108 to 104	108 to 104
100	100	Ditto, (4 per cent.)	98 to 98	98 to 98
100	100	Ditto, (4 per cent.)	98 to 94	98 to 94
100	100	Ditto	—	—
100	100	Oude & Rohilkund (g. 5 p. ct.)	100 to 101	101 to 101
10	10	Ditto, shares ditto	par to 1 prem	par to 1 prem.
10	10	Ditto, ditto	—	—
100	100	Ditto, Wadhwa	—	—
100	100	Secunde (gu. 5 per cent.)	101 to 103	101 to 102
100	100	Ditto, Delhi (gu. 5 p. c.)	101 to 102	101 to 102
100	100	Ditto, ditto (gu. 5 p. c.)	—	—
100	100	Ditto, Fungah (gu. 5 p. c.)	101 to 103	101 to 102
100	100	Do. Ind. St. Flo (g. 5 p. c.)	—	—

Share	Par	INDIAN GOVT. SECURITIES	Closing Prices January 26.	Closing Prices February 2.
100	100	Indian Stock 10 per cent April 1874	204 to 204	204 to 204
100	100	Ditto for Account	—	—
100	100	Ditto 5 per Cent July 1880	110 to 110	110 to 110
100	100	Ditto 4 per Cent Oct 1888	101 to 102	102
100	100	India Enticed Paper 4 per Cent	90 to 90	90
100	100	Ditto 5 per Cent Jan 1872	98 to 98	98
100	100	Ditto 5 per Cent May 1876	100 to 100	100 to 100
100	100	Ditto 5 per Cent, Rupee Deben 1872	90 to 92	90 to 92
100	100	Ditto ditto 1877	107	107
100	100	India Debentures, 5 per Cent Aug 1873	108 to 108	108
100	100	India Bonds, 4 per Cent £1,000	27s prem	27s prem

Share	Par	MISCELLANEOUS	Closing Prices, January 26.	Closing Prices, February 2.
100	100	Bombay Gas (Limited)	84 to 7	84 to 7
100	100	Ditto New	14 to 14 prem	14 to 14 prem
100	100	Oeylon Co., Limited	4 to 3 1/2 dis	3 1/2 to 3 1/2 dis
100	100	Ditto, A Shares	34 to 3 dis	34 to 3 dis
100	100	East India Land Credit and Finance (Limited)	8 to 5 dis	8 to 5 dis
100	100	Madras Irrigation & Canal (guar. 5 per cent by the Indian Government)	100 to 102	100 to 102
100	100	Nerbudda Coal and Iron (Ld.)	1/16 dis to 1/16 prem	1/16 dis to 1/16 prem
100	100	Oriental Gas (Limited)	74 to 84	74 to 84
100	100	Ditto New	1 to 1 1/2 prem	1 to 1 1/2 prem
100	100	P and O Steam Company	45 to 47	45 to 47
100	100	Ditto, New, 1887	8 to 2 dis	8 to 2 dis

Share	Par	JOINT STOCK BANKS.	Closing Prices, January 26.	Closing Prices, February 2.
100	100	Agra Limited, A	8 to 8 1/2	8 1/2 to 8
100	100	Do. do. B	—	—
100	100	Char of India, Aus. & China.	14 to 14	14 to 15
100	100	Chartered Mer of India, London and China	30 to 33	31 to 33
100	100	Bank Sec. and Aust. Chart	164 to 174	164 to 174
100	100	Land Mort. Bank of India, Ld.	34 to 34 dis.	34 to 34 dis.
100	100	Do 5 per cent. Debentures 1884 for 30 years	83 to 85	83 to 85
100	100	Oriental Bank Corporation	41 to 43	41 to 43

## INDIAN RAILWAY DEBENTURES.

Principal and Interest Guaranteed by the Secretary of State for India in Council.

Share	Par	COMPANY.	Closing Prices, January 26.	Closing Prices, February 2.
2237,500	5	Bombay, Baroda, and Central India	108 to 104	108 to 104
881,700	5	Ditto ditto	108 to 104	108 to 104
100,000	4 1/2	Ditto ditto	98 to 100	98 to 100
1,292,400	5	East Indian	108 to 110	108 to 110
1,806,800	5	Ditto	108 to 110	108 to 110
1,000,000	4 1/2	Ditto*	90 to 101	90 to 101
440,000	4 1/2	Ditto*	98 to 100	98 to 100
1,068,000	5	Eastern Bengal	100 to 108	100 to 102
1,074,400	5	Great Indian Peninsula	100 to 108	100 to 108
—	5	Ditto ditto	108 to 104	102 to 104
175,000	5	Ditto	—	—
100,000	4 1/2	Great Southern of India	101 to 103	101 to 103
—	4 1/2	Ditto	98 to 100	98 to 100
916,000	5	Madras	102 to 104	102 to 104
400,000	5	Ditto	102 to 104	102 to 104
20,000	5	Oude & Rohilkund (Lm)	100 to 102	100 to 102

\* Transferred by endorsement, without stamp.

## GOLD AND SILVER

Per Ounce.

Foreign Gold in Bars 117. 0/6.  
Silver in Bars (Standard) 48. 0/6.  
Mexican Dollars 42. 0/6.

## EXCHANGE.

Banks Drawing rates on Calcutta... 14 10/4 to 14 10/4.  
Ditto on Bombay... 14 10/4 to 14 10/4.

## Advertisements.

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SOLD

BY ALL DEALERS THROUGHOUT THE WORLD.

Established in 1850.

C. LAZARUS &amp; Co., CALCUTTA.

(Incorporated with Shearwood &amp; Co.)

**CABINET MAKERS, Upholsterers, Billiard and Bagatelle Table Manufacturers,** by appointment, to His Excellency the Right Hon'ble EARL OF MAYO, K. G. S. R. Viceroy & Governor-General of India, and to His Royal Highness the DUKE OF EDINBURGH, K. G. S. R. G. O. I. Importers, Appraisers, House and Land Agents, General Purchasing Contractors, 58, 59, 60 & 61, Bentinck Street, Calcutta.

**SOLE AGENTS IN INDIA FOR SEDLEY'S PATENT BRIDGES.**

C. LAZARUS & Co., sensible of the very liberal support extended to their Establishment during the past fifty years, desire on this occasion to return to their friends and patrons their most sincere thanks for the continuance of that esteemed patronage which C. Lazarus & Co. beg to state, at all times be their studious endeavour, not will they be wanting in any respect to maintain that uniform excellence of workmanship, combined with economic charges, with which their establishment has hitherto been identified.

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C. LAZARUS & Co., as Manufacturers, invite particular attention to their large stock of full-size Billiard Tables, the cushions of which are constructed on an entirely new principle, similar to those supplied by C. L. and Co. and now in use at the Bengal Club, and in most of the clubs and Messes of the three Presidencies.

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40	46 13	53 3	50 15	57 14
50	61 4	69 10	65 7	74 5
60	88 0	103 0	90 0	105 0

D. LANCASTER, Secretary.

Meerut, 15th November 1870.

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This society being founded on the sound principle of mutual insurance, divides all its surplus, or so much thereof as the directors think proper, amongst the members of life policy holders, by lot, or in such other manner, and does not work for the benefit of a separate proprietary body.

The members of the society consist of all persons who hold policies of insurance, upon their own lives, or the lives of others, for the term of years.

The Directors must be residents at Madras, and not more than 12 in all.

The society's funds are invested in securities of the Government of India, or in securities of the Government of Madras, or in securities of the Government of Madras, or in securities of the Government of Madras.

All investments are made in accordance with the directions of the Directors.

Annual General Meetings of the members are held at Madras, not more than 12 months after the 31st of March in every year.

An annual audit is made of the accounts of the society, and the report of the auditors is submitted to the Annual Meeting.

Quarterly statements of the members are sent to the Secretary of all the society and liabilities.

The next valuation will be made on 31st December 1870.

Premiums paid on policies for the whole term of life, or any portion of the period of the term, are paid immediately after the death of the policy holder, or at the expiration of the term, or at the expiration of the term, or at the expiration of the term.

The society is authorized to receive deposits from the members of the society, and to pay interest on such deposits.

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# THE Indian Economist.

A Monthly Journal devoted to Economic and Statistical Inquiries Concerning India.

Vol. II.]

CALCUTTA, MONDAY, 15TH MAY 1871.

[No. 10.]

## The Indian Economist.

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### THE MILITARY EXPENDITURE OF INDIA.

The following letter from Major General Balfour to *The Times*, reaches us in the act of preparing an appeal to the Select Committee, upon the subject of which it treats—the Military expenditure of the country. The *Statistical Reports*, which accompanies our present issue, gives a minute account of the numerical strength of the army before the Mutiny, and of the military expenditure of the Empire from 1834 down to the present year. It also gives, as exact an account as we are able to give, of the cost of the new Transport Service. The disclosure which these papers and statistics make is very startling, but first let us see General Balfour's letter—

TO THE EDITOR OF "THE TIMES"

SIR,—As the letter of your Calcutta correspondent in *The Times* of yesterday gives world-wide currency to a statement in the Budget Speech of Sir Richard Temple that the cost of the Indian Army has been reduced, and especially its cost in India, I hope you will allow me, as having been officially employed to control the expenditure for the Indian Army, and being therefore conversant with the facts, to make a few comments on the Indian Finance Minister's representations.

The Budget statement is that the total expenditure for the army in India and England shows a decrease of £216,000, and that the expenditure in India "is less than that of any year since the Mutiny." This statement ignores the fact that the army expenditure, at the rates of cost established in the year 1863-68, ought to be fully three millions sterling less than it is, in consequence of the very large reduction of English and Native troops that has been effected from that date. The actual expenditure has positively increased by about a million and a half since the year 1863-64, although since that year it has been relieved of the cost of 15,000 European troops, of the Nizam's Contingent, &c., and ought, therefore, to be more than three millions less than its actual amount.

Sir R. Temple says that the expenditure in India (£12,410,000) "is less than that of any year since the Mutiny." It is true that it is nominally £510 less than the expenditure of 1863-68, but this difference of £510 on an expenditure of so many millions hardly warrants such a boast, in face of the three facts—1, that this local reduction of expenditure is all there is to show for a local reduction

of troops who cost fully two millions sterling; 2, that the total expenditure for the smaller force has increased by £1,445,064; 3, that by Sir R. Temple's admission a good deal of the apparent increase in England and diminution in India is really a mere transfer of account, by the present payment in England of officers on furlough.

As Sir R. Temple intimates that the annual increase in the expenditure for European stores, averaging for the last three years much more than double the amount spent for a larger army in 1862-68, is partly due to the introduction of new weapons, it would be desirable to know whether the total amount for new rifles supplied to India has accounted for, or even approached, the excess of this expenditure in a single one of those years.

I am sorry to say that the annual Indian Army expenditure appears to me now fully three millions higher than it ought to be, and I cannot conceive any justification for it—I remain, Sir, your obedient servant,

G BALFOUR, Major-General.

London, April 11 1871

The truth simply is that the transfer of the Indian Army to the control of the Horse Guards—the Amalgamation of the armies as it was called—has entailed upon the country an expenditure perfectly frightful. To excite the reader's attention at the outset, we invite him to look at these figures—

The Indian Army (1853-54) —	{ Europeans ..	£ 80,856	
	{ Natives ..	238,000	338,856
The Indian Army (1871-72) —	{ Europeans ..	68,970	
	{ Natives ..	121,981	189,951
Less in (1871-72) by —		—	148,885

Thus the Indian Army at the present moment is less than two thirds of its strength before the Mutiny. Now let us see the comparative cost of the two armies, before and after all these Horse Guards' reforms—

#### MILITARY CHARGES UNDER THE OLD SYSTEM (288,000 MEN.)

	India	England	Total
1852-53	£ 10,807,070	£ 1,200,462	£ 11,997,532
51-54	11,027,476	1,471,974	12,499,450
54-55	11,193,268	1,539,821	12,733,089
55-56	10,417,360	1,872,717	12,290,077
56-57	10,711,011	1,765,415	11,916,426

#### MILITARY CHARGES UNDER THE HORSE GUARDS (189,000 MEN.)

	India	England	Total
(11 Months) 66-67	£ 12,411,388	£ 3,885,693	£ 16,297,081
67-68	12,604,467	3,890,839	16,495,306
68-69	12,930,760	3,330,716	16,261,476
69-70	12,528,710	3,500,000	16,028,710
70-71	12,682,800	3,617,201	16,300,001

Thus the cost of the army when 288,000 strong, under the East India Company, was £11,800,000 sterling a year, while the same army reduced to 189,000 men, costs under the management of the Horse Guards £16,260,000 a year. The army has been reduced in strength by a third of its entire numbers, while the cost has been increased by nearly 50 per cent. An army of 189,000 men under the old system would have cost, by simple rule of three, £7,740,000 a year, while under the new system it costs £16,260,000. A more astounding disclosure was surely never made. It is true that European troops cost more than native ones, but the change in this respect is after all trifling. There are only 18,000 or 19,000 more Europeans now than there were under the old system, with 118,000 fewer native troops to provide for; and yet the cost of this reduced army is five millions a year more than the old force which it has supplanted.

The truth is that the India Office and the Horse Guards, being under neither check nor control of any kind, spend whatever they please. Let the reader look at the cost of the new Transport Service, as he will find it at length in the *Statistical Reporter*. He will see that a service that used to cost the East India Company £70,000 a year, is now made to cost £500,000 to

£600,000 a year. And the same extravagance characterizes every other item of the Home expenditure. If we add to the annual expenditure for military purposes, the outlay of a million upon this transport fleet, and the millions more spent upon barracks and other military works in the last four years, the total will not fall very far short of £13,000,000 sterling a year, of which nearly £4,000,000 a year, upon one pretence or another, have been taken by the Home Government from Indian taxes for expenditure in England. Now look at the military expenditure of other nations for a moment—

Russia	(512,000 men)	£ 17,000,000 a year
France	(400,000 " )	12,000,000 "
Germany	(320,000 " )	9,000,000 "

Thus India, with an army of not more than 180,000 men, of which less than 70,000 are Europeans, is so administered, that this comparatively small force costs twice as much as the Federal Army of Germany, and almost the same amount as the whole Russian army, which is more than four times its strength. If ever there was a case for sharp and decisive reform, surely it is here. Will the Select Committee deal with it in earnest, or simply gloss it over?

### THE HOME DEPOTS.

[Some important Official Papers upon this subject appear in one of the Bombay journals at the moment of our going to press. We reproduce these papers further on in our columns, but are obliged to defer comment upon them until our next issue.—Ed. I. E.]

THE call which India makes upon England in return for the wealth which she confers, is merely the permission to employ and pay for the civilians and soldiers required for the public service, the same soldiers and civilians being but too glad to avail themselves of the advantages which attend service in India. We have determined that the force required for the security of our Empire is 70,000 English soldiers, and the number of recruits required to supply the wear and tear of this force is reckoned at something under 5,000 a year. In other words, the sole demand which India makes upon England, in return for the wealth which she confers upon her, is permission to compete with other countries for the services of 5,000 of the 200 to 250,000 emigrants who annually leave her shores to push their fortunes in other lands. This is the extent of "the strain," as it is called, upon England's resources; while in immediate and special return for it a splendid army of 70,000 men trained, paid, and kept in active discipline at the cost of India, is at all times available for the service of England, as was strikingly exemplified in the late Abyssinian War, the prosecution of which reflected so much glory upon the national arms. The case is often misrepresented, and the prevalent idea at Home certainly is, or was, "that England is obliged to maintain and pay for a large standing army in consequence of her possession of India." Thus the *Westminster Review* three or four years ago demanded: "Are the people of England prepared to maintain seventy thousand men, the greater proportion of all the armies of the Kingdom, in permanent garrison in India?" Such expressions imply, as was pointed out at the time, that England bears the expense of maintaining an army for the use of India, whereas the truth is that India is maintaining a vast army which, though paid by India, is available at any moment for the service of England. Of these troops, paid from the revenues of India, no less than 10,000, on the average, are stationed in the Home depots, and form a part of the defences of England at all times. Now India is not merely required to pay for the transport of the troops both to and from India, but is made to pay a consolidated charge of £10 per annum to the Home Guards for every British soldier serving in the country upon the pretext that it is necessary to keep up these depots in England to maintain the force. This charge of late years has amounted to nearly £700,000 a year, and must be held to be a most unwarrantable exaction, when it is remembered that these depots form an important part of the garrison required for the defence of the United Kingdom. Thus at the very time when the Colonels of the French army were threatening the nation with invasion (1859) on account of the Orsini plot, the Ministers and Publicists of England were congratulating themselves upon the presence in England of some 20,000 to 22,000 soldiers in depot, the cost of whom was being defrayed by the Indian tax-payer, on the ground that the regiments to which the men belonged were serving in India. The pretext was true, but the exaction was surely disgraceful. The Indian revenues, as will be seen from the statements given below, were charged no less a sum than £854,035 in 1859 on account of these depots, and £823,363 in 1860. Thus was the defence of the richest country in the world

shabbily devolved upon the very poorest. Matters since then seem to have gone from bad to worse. The European army has been reduced from 100,000 men to 70,000, while the charge on this depot account, instead of being reduced proportionately, recurs every year in the shape of nearly £700,000 in the Home account. A close examination of these accounts would shew, moreover, that other charges connected with the troops are improperly devolved upon India, under the head of "Retiring Pensions and Allowances." We can but earnestly recommend the whole subject to the consideration of the Select Committee.

"To show how great the distinction really is between our treatment of India and other dependencies, let us suppose a bill made out by the Secretary of State for the Colonies, not only for the expense of all the regiments serving in the colonies, but for their depôts and inefficiency in England; and, besides this, for his own salary and office expenses; and let him add the expenses of investing colonial governors with orders of merit, and the cost of a new Colonial Office, to be erected in St. James's Park, and, in short, let him include every charge incurred in England on account of her colonial possessions; and having apprised this to the several colonies, let him direct their governors each to collect his share and remit it to England; let him further depute an officer as financial minister, to determine by what taxes the necessary revenue shall be raised. He will then do exactly what is done with regard to our Indian possessions—till this is done there is no analogy between the two. Or, let us draw a comparison between two countries in which war has been lately fought: we mean New Zealand and Bhutan. In New Zealand the policy and acts of the local government, over which England has a very imperfect control, have involved the country in war, but of this war England must bear the financial loss, and a large portion of the expense. In India it is exactly the reverse. The policy with regard to Bhutan is entirely that of the English Government, in which the people of India have no voice whatever, but of the cost England does not pay a farthing."

We take this extract from the *Quarterly Review* of July 1866, and commend it to the attention of the Committee. We venture to remind them that the just thing alone is the strong thing in this world, and we appeal to them to do justice to the people whom they rule.

### HOME DEPOTS—INDIAN ARMY.—1858-1861.

(FROM PARLIAMENTARY RETURNS).

Return showing the number of officers and men at the depôts in Great Britain and Ireland, India on the 1st of January, 1858, 1859, 1860, and 1861.

Dates.	Officers.		Men.	
	Infantry.	Cavalry.	Cavalry.	Infantry.
1858.				
1 January ..	66	214	1,040	10,871
1 February ..	69	221	1,157	10,958
1 March ..	73	225	1,434	10,184
1 April ..	57	262	1,457	10,848
1 May ..	54	267	1,457	10,923
1 June ..	55	267	1,505	10,300
1 July ..	52	270	1,505	10,498
1 August ..	48	276	1,507	10,613
1 September ..	48	280	1,504	11,000
1 October ..	52	248	1,547	11,070
1 November ..	48	245	1,504	11,340
1 December ..	45	204	1,502	11,791
1859.				
1 January ..	29	254	1,479	12,787
1 February ..	27	247	1,725	12,961
1 March ..	40	269	1,961	12,610
1 April ..	35	264	2,335	10,761
1 May ..	33	264	1,935	10,616
1 June ..	33	223	1,900	10,853
1 July ..	38	220	1,913	10,643
1 August ..	44	230	1,991	11,140
1 September ..	49	261	1,949	10,906
1 October ..	56	243	1,330	10,854
1 November ..	43	264	1,511	12,133
1 December ..	45	272	1,363	12,613
1860.				
1 January ..	44	280	1,450	12,280
1 February ..	52	269	1,607	12,430
1 March ..	53	264	1,614	12,486
1 April ..	49	280	1,404	12,650
1 May ..	50	274	1,431	12,654
1 June ..	50	261	1,370	12,678
1 July ..	42	235	1,324	12,792
1 August ..	45	216	1,361	12,184
1 September ..	46	209	1,363	12,414
1 October ..	43	200	1,170	12,166
1 November ..	43	241	1,306	12,296
1 December ..	38	212	1,220	11,770

Statement of the Annual Charge payable out of the Revenues of India in respect of Recruiting Districts and Depot Establishments, from the 1st of April 1858 to 31st March 1861.

Year ending 31st March 1859	£854,035
31st March 1860	823,363
31st March 1861	823,363
31st March 1862	823,363



## THE LAND REVENUE OF INDIA.

## IS IT BEING SACRIFICED OR NOT?

*An Appeal to the Select Committee of the House of Commons appointed to enquire into the Administration of Indian Finances.*

A few years ago (1866) after a long and unsuccessful struggle in this country against the Permanent Settlement delusion,—the reigning madness of the hour from the Mutiny down to 1865—the Editor of this Journal made a final effort to inform public opinion at Home of the disastrous character of the revolution that was being made. The effort was happily successful, and it is given to few men to exercise so important an influence upon the institutions of their times. The evidence which the Select Committee is recording upon this subject will bring this vexed question at last to an end, and finally deliver the country from the peril in which it has so long stood from the unsettlement of men's mind thereon. The formal withdrawal of the Permanent Settlement Despatch of 1862, and a condemnation of the policy which it expresses, will be the first of the great benefits India will, we may hope, reap therefrom. It is the simple fact that the change which has taken place in opinion at Home and in India upon this question was brought about mainly by ourselves. "Deliverance is wrought," says Newman, "not by the many but by the few; not by bodies but by persons. Living movements do not come of Committees." We lay stress upon this fact, that we may make it the foundation of a claim to be heard attentively by the Committee upon a subject cognate to the Permanent Settlement question, and almost as vital to the well-being of the country. The Government of India, without avowing what it has been doing—without even knowing what it has been doing—has of late years been making a great and calamitous revolution in the fiscal system of the country; a revolution which, if not stopped by decisive measures, will before the end of the century have acquired an impetus that will make all attempt to arrest it hopeless. In silence and unobserved, the change has already made the most fatal advances, and but for the attention at last fixed upon it, would have overspread the entire land within a few years. The disease is universal, and springs from the same root as the Permanent Settlement folly. Sir Richard Temple's notion, that "if Government will but limit the land-tax, it will 'be quite safe to trust to the increase of other taxes'" (*Central Provinces' Report*, 1861-62, para 200) is the common origin of both. The statement means—that we should abandon the ancient fiscal system of the country under which the land bore the burdens of the State, and should launch ourselves upon a system of Customs and Excise instead. Now, although this error has never received formal sanction, it has been the practical rule of the State in its whole policy for many years past. While every fact of our condition warns us against this notion, and although our present embarrassments are the immediate fruits of its adoption in the Central Provinces and other parts—the State has been practically giving expression to the error in all its proceedings towards the land during the last ten years. That the true source of State revenue everywhere is the land; and that the only sound policy is to preserve "the land as the property of the State" is admitted to be true by all the Governments of India, and yet there is not one of them that either by design or through oversight, is not practically pouring contempt upon the belief. Without avowing that it is designed to make a change in the fiscal system of the country—the change is as really made as though it had been formally debated and determined upon. Not an attempt is made in any of the settlements of the last ten years, to give expression to our professed conviction that "the land is the true source of State revenue." The statement is accepted as an economic truth; but that we should regard it as a rule of conduct, and make it, as native administrators still do, the leading principle of our fiscal system never enters the head of any one. Mr. Elphinstone points out (*History of India*, page 76) that under our present system a country was reckoned moderately assessed where the State took only one-third of

the produce. For the reasons pointed out by Mr. Buckle in the 2nd Chapter of his great work on Civilisation, rent in India is ever abnormally high, one-half the produce having been commonly exacted under native rule. Thirty years ago, we ourselves were taking this proportion in many parts of the country; while to-day, after an enormous expenditure upon railways, and other works for improving the soil, and when the people have been enriched beyond all precedent by the high prices prevailing for produce for many years past, we have gone to the opposite extreme altogether and are exacting almost nothing. We have but this one source of revenue which the people pay without sense of grievance, while we are destroying it by the preposterous re-assessments being made in the country at almost nominal rates. It is meanwhile impossible to exaggerate the importance of preserving alive amongst a people so impracticable, the conviction that the rental of the soil belongs to the State. We are everywhere destroying the traditional belief that the State deals considerably with the cultivator when it leaves him two-thirds of the produce. By lowering the assessment to the point of abandonment, we are preparing a harvest of difficulties in the future. We are destroying the one source of revenue which the people admit to be a just and right exaction. They are everywhere willing to pay the land revenue, because their fathers paid it before them for a thousand years. In our folly we abandon what they offer with both hands, only to fill the country with outcries by our attempts to take in novel ways a fraction of what we have foregone in the assessment. These 30 years leases at nominal rentals are revolutionizing the fiscal system of the country, without the Government discerning it. They are destroying the tradition that the State is joint owner of the soil with the ryot, and are fostering the belief that the State has no rights at all, and is an oppressor for exacting anything whatever. It is vital to the peace and well-being of the country that the old traditional rights of the State to a substantial share of the produce should be carefully fostered, while we are doing our best all over India to destroy them and to impress the ryot with the belief that the land is exclusively his own. The result will be that before the end of the century the land revenue will be practically settled at a quit-rent, and the State find itself without a single unquestioned resource. Instead of vigorously asserting the State rights to a substantial share of the produce, for the means of carrying on works of improvement as well as the administration, we are accustoming the cultivator under these leases—which are transferable and heritable,—we are accustoming him to forget the co-proprietorship of the State altogether, and any attempt hereafter to remove this impression and raise the assessment to its proper level will provoke a rebellion. We have done all that we can do to awaken the Government to the error that is being made, and have to some extent, we believe, succeeded. What wonder that the land revenue does not increase when we are practically committed to the belief that it ought not to be allowed to increase. One single idea has dominated the Settlement Department in every province for years past—a morbid dread of not fixing the assessments low enough. Instead of considering the financial position of the Government, the difficulty of raising revenue by untried means, the capabilities of the land, the fact that we are settling it for a generation of years, the necessity of keeping the State rights alive in the memory of the people, the inevitable growth of the expenditure, the vast outlay to which we are committed upon Public Works, the precariousness of some of the sources of our income, and the fact that we may be overtaken at any moment by famine or war; instead of such considerations intelligently brought to bear upon these settlement proceedings, they are carried on in a sort of idle notion that if we only take care of the cultivator, the State will take care of itself. The notion is one of those half-truths with which the world is filled to the ruin of the interests which they affect. A settlement officer in these days has simply to show that the assessment which he proposes is a quit-rent, to get his work sanctioned as a matter of course. Let one of them come forward with a proposal to levy one-half the real rental in view of the

necessities of the Imperial Treasury, or for the purpose of important Public Works in the district, and his report would be held to be mad.

Nothing is more common, consequently, than for them to propose deliberately rates of assessments for 30 years which do not represent one-twentieth or one-thirtieth of the value of the harvests of late years. Now, what will the Select Committee do? We do not ask it to take our word for the facts we disclose. We shall devote the present issue of the *Economist* very largely to a review of one of the latest of these settlement reports for their careful study. It is the question of the time in India. The Permanent Settlement folly is happily dead. The Committee are going to bury that delusion. Let them take care how they leave this new one to cumber the ground.

#### REVENUE SETTLEMENT OF SOOPA TALOOKA IN THE SURAT COLLECTORATE—1869.—(By N. B. BEYRS.)

THE perusal of this Report reduces us almost to despair. But of its length, we should reproduce it *in extenso* in our columns. Our readers—the Select Committee in particular—might judge for themselves whether the remarks we are about to make upon it are justifiable or not. The Bombay system of survey and settlement we believe to be the happiest and under which a body of cultivators can possibly hold, and opinion seems to be gravitating to that conviction throughout India. Under it the farmer enjoys a 30-years lease which is heritable, transferable, and renewable for ever, upon terms which can never be otherwise than moderate, and which secure the benefits of all improvements made by him for all time, to himself alone. Subject to the assessment only, which is fixed for periods of 30 years upon a careful consideration of the position and quality of the land, his holding is for all practical purposes, a freehold. He can do with it whatever he pleases—cultivate it, or lease it, fallow it, farm it, or rent it, or sell it, or even abandon it wholly, or in part, at any period of the lease. His landlord preserves no game to eat his crops; inserts no cultivating clauses in the lease to fetter his discretion; asks no premium for entrance upon his lease, and claims no fine on its renewal. In a word, there is no farmer in the world that has one-half the advantages which an Indian ryot enjoys under the State leases of Bombay. He is made virtual proprietor by the occupancy statute conferred upon him, and the State of design abandons to him a considerable share of the rental. Now it is here that the whole debate between ourselves and the Government arises. We approve cordially the system of settlement. We have given it the warmest support from the first hour we understood its real nature. We have done more perhaps than any other to spread the knowledge of its merits, and to make disciples to its school. The system is admirable; but it has one fault in common with every other human institution—it cannot be carried on by steam: a wise head is requisite for carrying it on. The Settlement Department of Bombay has not escaped the tendency in modern times to reduce the assessment to rates that simply mock the necessities of the State, while they completely demoralize the cultivator. If there is one tradition in the country which it is vital to its well-being that we should keep alive amongst the people, it is the clear, distinct, living memory that so long as the State demand does not exhaust the profits of cultivation, the cultivator is moderately assessed. In a country that refuses to be taxed in any other mode, and amongst a people so tenacious of what is traditional, what folly can be so profound as the abandonment of the one impost to which the country has from time immemorial been accustomed, and which the very conscience of the people will not allow them to oppose. When we remember, moreover, that this one impost by a fortunate accident happens to be the very best a nation can possibly be accustomed to, and that it is a tax upon no man's labour and upon no man's wealth—what are we to say to the thoughtless and Quixotic tampering therewith which the

settlement proceedings of every province of the country reveals of late years? The folly is profound. Our settlement officers in their morbid and reactionary dread of over-assessing the land, are destroying the resources of the State and actually compromising its future. Fix the assessment for two successive leases—two generations of years—at the rates you are now imposing, and let the emergency of a later period be what it may, you have destroyed all memory on the part of the people of those old State rights which ten thousand considerations with trumpet tongue require you to maintain alive in their convictions. You are not merely embarrassing the Government of to-day; you are making the Government of the future impossible. By these low assessments, you are stereotyping the degradation of the idle cultivator by withholding from him that stimulus to exertion which a just assessment would bring with it, while you are simply encouraging the better class to squander in the idle luxuries of feasting and of display, the means which the State requires for the education of the people, and for developing the resources of the soil. The mistake has no redeeming feature whatever. It is an error from whatever side you approach it, when once placed fairly in the light which the facts of our condition pour upon it. Fortunately, we are but on the threshold of resettling the Bombay Presidency, and if we can but rouse Government to the error that is being made, we may yet secure the future. The fact seems to be that we have been so long accustomed in India, owing to the agricultural depression of a century, to hear of such assessments as three or four annas per acre, that it requires a dead-lift of considerable force to get us upon the platform of behaving in assessments of five, ten, or fifteen rupees per acre, as possible.

To understand the error which has been committed in this settlement, it is necessary to get rid of the common delusion that the produce of the soil is too poor in value to admit of the payment of a high rent to any one. That much of the soil is wretchedly cultivated and grows nothing but the coarsest and cheapest grains is quite true, and such land will of course return but a very poor rental to the landlord whoever he may be. On the other hand, there are vast tracts in the country upon which the richest productions grow with unrivalled luxuriance, and these lands return, or should return, to the landlord rentals which will seem fabulous to Englishmen, who are accustomed to look upon their national average of 28 bushels of wheat and a rental of 37s. per acre as evidence of the highest cultivation in the world. Few persons seem alive to the fact that where water and manure are plentiful in India, and markets are near, the average English rental of 37s. bears no proportion whatever to the rent-paying capabilities of Indian soil. Instead of 37s. per acre, garden land in this country, when in the neighbourhood of a market, yields a rental of from £15 to £20 per acre.

Our Settlement Departments practically ignore the fact altogether, and if they add a few rupees per acre to the dry crop rates on account of water, congratulate each other upon the courage they have shown. Soopa is one vast garden, with abundance of water everywhere. In the words of the Report before us (para 23) "the only limitation to its being entirely under garden or rice cultivation; is owing to the difficulty experienced in procuring sufficient manure. Wells can be sunk with unfailing certainty of securing sweet water, but the supply of manure barely suffices for lands now under superior cultivation. At some future period, when the custom of importing manure shall be felt a necessity, one can well conceive the talooka being equal to the production of double its present supply." A concurrence of circumstances has made the talooka a very garden of Eden. In the very best villages of the rich land of Ahmedabad 80 maunds of *goor* (unrefined sugar) is the highest yield known per *beegah*, and to obtain that yield it is necessary to irrigate the field every third day. In the best villages of Soopa on the other hand, the yield is 120 maunds while the climate is so moist from its nearness to the sea that it is only necessary to irrigate the crops once a week. (Para 102.)

\* A sugar-cane crop taken off a rice field without any fallow or intervening alternative crop, would be a phenomenon in Kaira or Ahmedabad. Sugar-cane is never adopted as a rotation, or even planted in rice fields in those parts; whereas in Soopa the common rotation is double crops (of rice and wall) two consecutive years, and sugar-cane the third, a perpetual round, which never allows the land rest from culture more than 3 or 4 months at a time."

It is impossible for us to give the reader any just idea of the natural richness of the country; let him however read for himself the following extracts from the Report —

"Not a hill or mound higher than the bund of a village tank, breaks the even aspect of Soopa. Fruit and timber trees are found all over the district, but not to an extent injurious to cultivation. Most villages have a top of mango trees, and many a charming orchard for a revenue officer's camp. The date, tar, and coconut are common, especially the date, which most abounds in a group of villages about Nowaree. Patches of babool are plentiful in the northern villages, where the ryots hold grass-land at nominal rates. The general appearance of Soopa impresses one with the conviction of a long-standing state of order and prosperity, and no part more so than the country between Amulnar and Echamper, which is nothing less than an extended orchard; even the strips dividing fields are planted with valuable fruit-trees. Verdure is seen everywhere, except coastwards where the saline nature of the soil has still to be overcome by the industry of man. A multiplicity of tanks, kutchas and pukka wells, constantly keep the land under a succession of luxuriant crops, of which rice and sugar-cane are the chief. Most of the villages are composed of well-built, tiled, and thatched houses and would pass as kusha towns in the Deccan and Concan. The style appears very similar to, but rather better than, that of the Surkhon, Kurrode, and western Walore villages, and the general condition of the ryots seems considerably better than that of any but the very best Chicklee villages. They are well dressed, even to the Dher, who scarcely ever puts aside his Turkey red turban.

"Mr. Bellasis in his sketch of the southern districts of Surat, referring to the soils of the six southern purgunnas, says Parchoi is the richest and most productive. That purgunna presented as I saw it early in November, as pleasing a prospect as the eye could wish to dwell on. It was one extended field of luxuriant cultivation. Sugar-cane, ginger, saffron, tobacco, the castor oil plant, cotton, chillies, vegetables and grain of all kinds, covered the country as far as the eye could reach. The whole of the land of this purgunna is either under cultivation, or enclosed for pasturage. So little of the latter is left that the cultivators complain they have not sufficient grass-land for their cattle. The Soopa purgunna is also very fertile and highly cultivated. In Chicklee and Bulsar there are many fine and prosperous villages, but the cultivation is not so continuous as in Parchoi and Soopa. In alluding to the rice soil of Chicklee, Major Prescott says:—"It is very nearly as good as that of Kurrode and Soopa, which latter is amongst the best in the Surat Collectorate." These opinions are endorsed by the general consent of the community; and there is no doubt, that Soopa, in comparison with other districts, is capable of bearing a higher average rate upon every description of soil—the superiority of which is an admitted fact."

The Report abounds with similar accounts of the district, which is perhaps the richest in all India. The climate is health itself. Fever and malaria are unknown; and even in the hottest weather, tent-life is pleasant. The talook is densely peopled—382 to the square mile; is full of wealth; is covered with a net work of roads; has 20 miles of seaboard, while two navigable rivers and the Baroda Railway run through it, and important markets are immediately adjacent. The yield of the rice and garden land is given per beegah in the Report. Reducing the figures to the standard of the acre. Why is this not done in the Report itself? The average yield is as follows:—

	lbs.	to	lbs.	Per acre.
Rice .. .. .	2,000	to	4,200	ditto
Sugar-cane .. ..	4,200	to	8,400	(goor) ditto
Onions .. .. .	7,000	to	21,000	ditto
Chillies .. .. .	700	to	2,100	ditto
Brinjals .. .. .	3,800	to	10,500	ditto
Ginger .. .. .	6,300	to	12,200	ditto
Saffron .. .. .	2,800	to	4,200	ditto
Garlic .. .. .	3,800	to	5,200	ditto
Sweet Potatoes ..	1,760	to	3,600	ditto
Kams (Katalao) ..	10,500	to	21,000	ditto

Now 16,000 acres out of the total 60,000, of which the talook consists, are yielding this varied and rich production, much of it, such as brinjals, garlic, sweet potatoes, and rice, being preceded or followed by another crop within the year. The average yield of goor (unrefined sugar) would seem to be (paras 19 & 24) about 6,200 lbs. per acre, which at the price of 10 local seers (2½ lbs.) per rupee, the price prevailing during the six years immediately preceding the settlement, represents a gross money produce of Rs. 663 per acre. But the price of goor in the year of the settlement was, as we are told twice over (para 24 and page 23) as high as six

local seers (2½ lbs.) per rupee, and at this price these cane-lands in that year must have yielded as follows:—

The poorest land 4,200 lbs. per acre .. .. .	Rs. 7 7 7 or	473 14 0
The best land 8,400 .. .. .	" 1,474 or	£147 8 0

And the very highest assessment is but Rs. 26! If the statements of the Report be true, nothing is more certain than that the harvest of cane alone in the year of the settlement sufficed to pay the whole 30 years assessment twice over! What the real rental upon this cane-land may amount to, it is impossible for us to say: we only know that it must be many hundred rupees per acre in such a season as that of 1867, and not less upon an average of the six years 1861-67 than Rs. 250 to Rs. 300 per acre. Indeed Mr. Beyts himself admits this by implication in para 24. The assessment upon the land is meanwhile fixed by him at Rs. 17 to 26 for the next 30 years! Who can feel surprise, when the State claims are sacrificed in this outrageous manner, that the mere right of occupancy in some of these lands can be sold, or mortgaged, at Rs. 1,000 the acre (para 18 Supplemental Report). The real rental is several hundred rupees per year, and Rs. 1,000 for a right to hold for ever at Rs. 17 to 26 is a very good investment. But what are we to say of such outrageous proceedings upon the part of the State, in the midst of its embarrassments and necessities.

In para 107, the fact is incidentally disclosed that the very same land which is assessed for 30 years to come at Rs. 26 per acre actually paid our own Government an assessment of Rs. 160 so far back as 1823, at a period when the price of produce was but one-half what it now is. We must quote the entire passage—

"Both Kucholee and Amalsar (villages of Soopa) are now paying an average rate of Rs. 26 the acre, and it is recorded in the memoir of Amalsar that Rs. 95 the beegah, equivalent to Rs. 160 the acre, were paid in 1823 under our own Government, a rate which is not unusual to this day in the Guicowar's Gundavee purgunna. If it were equitable to assess an acre of land at Rs. 160 when the price of goor was 2 Rs. the maund, the corresponding assessment now ought to be 320 Rs., being the former sum multiplied by two, the proportionate increase in the price of the article. These figures placed in juxtaposition with ours at the present time, appear grossly absurd to revenue officers trained to moderate views of assessment."

But a reference to para. 24 will shew that the price of goor at the time this Report was written, was not 4 Rs. but 6 Rs. per maund, the average price having been 4 Rs. for the preceding six years. Now look at this disclosure, and ponder it. The land was positively paying Rs. 160 an acre fifty years ago, at a time when its produce was selling at one-half the average price of these days; but instead of Rs. 320 the acre, our settlement officer decrees that the rate now shall be Rs. 26 for 30 years to come. He volunteers the information that the Gaekwar's Government in districts immediately adjoining, is still charging the old rate of Rs. 160, and adds with a naïveté almost ludicrous, that "these figures placed in juxtaposition with ours appear grossly absurd to revenue officers trained to moderate views of assessment." It never occurs to him that the absurd part of the business is the part played by himself and his "moderate views of assessment." What wonder that the ryots' leases are worth £100 the acre! Are not such proceedings very idioty itself, in our circumstances? In grappling with folly so abject, there is nothing left for the reviewer but to make it an example if possible upon the spot. By this officer's own express shewing, the rental of the land upon which he has fixed an assessment of Rs. 26 cannot fall short, with goor at Rs. 6 the maund, of nearly Rs. 500 the acre, while he points a sneer at the Gaekwar for wisely taking Rs. 160, and with a self-complacent chuckle over his own "moderate views of assessment," fixes our rate for 30 years at Rs. 26. And next year, as the consequence, he will have to carry an income-tax machinery into the district, to supplement his Rs. 26, while the Gaekwar cries "Wah Wah" in astonished amusement "at the ways of these English." It is difficult to maintain courtesy or common patience with such drivelling self-complacency. Whether it is better to raise your assessment to a scale commensurate with the

State necessities or—imposing your “moderate” scale—find it necessary at once to supplement it with the machinery of an income-tax! At para 17 we come across another astounding disclosure of the sort of views which prevail in the department:—

“It is noticeable throughout Guzerat, that Górat villages are, generally speaking, healthier and wealthier than others. No amount of bad Government or oppression seems to retard the prosperity it inherently possesses and yields to the husbandman. In a moist climate like this it appears to stand being taxed from Rs. 60 to 160 Rs. the acre (as for instance in the Guicowaree kusbas of Gundavee and Nowsaree) still affording sufficient profit to the ryot to enable him to provide every necessary of life. Its wonderful productiveness is only slightly less in the northern zillabs, and I may be pardoned for digression, in stating that the mookhee Patel of Soojitra, a Guicowaree village in the Pitled Jurganna, informed me his people paid a lump sum on the gross area of the village, equal to 18 Rs. the beegah, or 30 Rs. the acre. Such instances of rapacity, on the part of the Guicowar’s agents, may excite our sympathy perhaps unnecessarily, because the ryots do not seek another field for their labour, when they have the opportunity of doing so.”

Every pains is here taken to assure us that in a moist climate like this, the land is so wonderfully productive that it will bear an assessment of Rs. 60 to 160 Rs. the acre, and still afford sufficient profit to the ryot to enable him to provide for every necessary of life. That we may be quite sure these views are not mere speculations, we are next assured that the Gaekwar positively does levy an *average* rate of Rs. 30 an acre in districts immediately adjoining, and we are warned against allowing our sympathies to be excited, as the ryots are content to accept the Gaekwar’s terms. And all this is the prelude to the following strange outburst:—

“It needs more caution than I possess, to suppress indignation, in learning of the same Durbar’s vile caricature of our institution, to wit, the survey and settlement, entrusted to cast off under-strappers of our department, who were never known to have possessed any marked qualification except it be for falsehood and extortion. Were Soopa handed over to the subha of Nowsaree for a short time it would probably return three times the present revenue, without the slightest compunctions of conscience.”

A more curious illustration of the state of mind into which the department has wrought itself could not be given. For the State to exact a moderate assessment upon the land has come to be regarded as “extortion,” and a matter to occasion us “compunctions of conscience.” The revelation is so curious that we must carry it a little further. The work of the settlement officer is over; and full—and to himself at all events satisfactory—expression has been given to his “moderate views of assessment.” The revenue has been fixed at a-third of the proper rates, and the curtain rises upon our officer sitting in durbar to receive, as he hopes, the grateful acknowledgments of the people for the favor shewn to them. The scene is prefaced with a little Bhatella’s song:—

“I must admit with exceeding regret that the introduction of the experimental settlement was not received by the ryots with any manifestations of joy, although I have reason to believe that the great body of the people are satisfied with the rates, and that the petitions and complaints, all in a general and stereotyped form, are simply the result of Bhatella (Brahmin) teaching. During the settlement, four professional petition writers put up their stalls in front of my office tent, and sold petitions, most of them ready-made, varying in tone and depth of sorrow from 4 annas to a rupee in value. Duplicates with your (the Collector’s) name and triplicates to the Revenue Commissioner were despatched with the utmost promptitude and method. It rejoices me to think that both you and the Revenue Commissioner are not unacquainted with the truculent and never-to-be-satisfied class of ryots in this district. How far I am justified in giving them such a bad character is another matter. The simple fact that several villages actually reduced by the settlement, and others which ought to have been raised much more than they have been, were as loud in their manifestations as the villages which had some ground for complaint. Villages which had not petitioned were threatened with excommunication, and in this manner it has been the Bhatella policy from the commencement of our rule to show as much content dissatisfaction as is possible, in the hope that perambulate their efforts may bring forth a little good.”

“In conclusion of this subject, I may record a case which occurred in the presence of the mandidar of the district. When Shahoo came up for settlement (a village very liberally treated, but not more so than other villages of the talooka have been) the mookhee Patel, not knowing how much his village was actually raised, distinguished himself by loud complaints of spolium, and warned me that his people would leave our district for Guicowar territory, if I increased their khataas. After I had dismissed all the khata-dars I called up the Patel and told him I had just heard that

his people cultivated land as copurwaras over the border in Guicowar territory (owing to the complete compulsion of Shahoo) and asked him to tell me candidly what his people paid the Guicowar for dry crop land. The Patel being really a good honest Rajpoot, who had only been acting a part in the Bhatella farce, told me in open Kutcherry that his men paid 4 Rs. the beegah for land we were assessing at 4 Rs. the acre—*as was equal to 1½ beegahs*. I need not therefore add another line to prove how utterly worthless all the complaints are that I have been over-assessing this district.”

Are we to laugh, or to weep? Our first impulse is to laugh—our next to swear. We wanted a man like Mr. Beyts to place the temper of the department in an effective light. We have here a man thoroughly in earnest, without the least suspicion that there is anything unsound in the “moderate view” upon which he dilates with such intense, such ludicrous satisfaction. Fooled to the top of his bent, chaffed and humbugged by the people, he stalks off the stage in an attitude of calm superiority over the Gaekwar, only to appear next season upon the boards as a Collector of income-tax or some other precious device of the school that has done nothing but tamper with the land these ten years past, and felicitate themselves, with their nose in the air like Mr. Beyts, upon their moral superiority to that chief of publicans and sinners, the Gaekwar.

In para. 49 a comparison is instituted between the rates of assessment levied in the district by ourselves 50 years ago, and those which are now settled for the next 30 years. A beegah of the best land is selected for the comparison; land which requires no rest, and on which rice and sugar-cane are cultivated in a rotation of three crops of rice to one of sugar. Such a beegah of land then, under the system existing in 1822-23, was assessed as follows:—

1822-23. . . . .	First year . . . . .	Rice . . . . .	Rs. 27	Assessment.
	Second . . . . .	Sugar . . . . .	100	“
	Third . . . . .	Rice . . . . .	27	“
	Fourth . . . . .	Rice . . . . .	27	“

an average assessment of Rs. 45½ per year. The same land is now assessed for the next 30 years at Rs. 26½ per acre, or Rs. 15 per beegah:—

1822-23 . . . . .	Assessment per Beegah . . . . .	Rs. 45½
1870-00 . . . . .	“ . . . . .	15

Well may Mr. Beyts say that the comparison will suffice to shew the widely different policy of the past and present time. It never enters his head to question the wisdom of the present policy; it is sufficient for him that the old rates were very high, and the new ones very low, and *therefore* the new ones must be right. Now the history of Western India from the year 1817 when we overthrew the Peishwa, has been an open book to students for many years past, and may be read by him who runs. The distress which fell upon the great body of cultivators in the Presidency from 1817 downwards, was not confined to Western India, but was more severe there than elsewhere, and the causes of it are as well known to-day as are the causes of the tides. We now know that not in India alone but everywhere throughout the world, prices were steadily falling from the beginning of the century, owing to the fact that the supply of bullion was becoming inadequate to the wants of the world. India which, owing to her geographical position, never receives more than the residual flow of the mines after all other nations have retained as much as they can intercept, got little or nothing; while we innocently made an error of frightful magnitude in substituting for the old Mahratta revenue system of payment *in kind*, the English practice of exacting payment *in money*. In looking back we discern the error clearly enough. The result was that as the cultivator could not get silver for his corn, he had to take any price that the sowkar offered. *Now it is well known that, that made the old assessments so heavy to be borne*. Prices were falling every year, while the assessment remained the same. The result was that the ryot could not pay the assessment, and constant remissions had to be made. It was not that the assessment had originally been pitched too high, but that values were undergoing a change, from causes which were not seen at the time; which have only been discerned clearly in the last 30 years, when the discovery of the gold-fields has so entirely reversed the movement.

The average price of *goor* in the Surat Collectorate, where the *Soopa* district is found, fell from 400 tolas per rupee in 1822-23 to 240 tolas per rupee in 1860-61, while in 1863 it had mounted up to Rs. 275 and in 1866-67 to Rs. 222.

1822-23	400 tolas per Rupee
1860-61	240 " "
1863	275 " "
1866-67	222 " "

We can surely understand that an assessment of 45½ Rs. per beegah may have been moderate while *goor* was selling at 400 tolas per rupee and perfectly crushing when the price had fallen to 240. Mr. Beyts tells us (para 76) that it may now "be fairly accepted that the *eastly improved condition of the country* has permanently raised prices 50 per cent higher than they "were 30 years ago." The rise is understated. Fairly to compare the new rates with those of 1822-23 we require to know the average price of *goor* in Nowaree (the market for *Soopa* produce) 50 years back. Unfortunately, we have no information so early; but if the fluctuations in the price of *goor* have corresponded, as they no doubt have done, with those of grain which we give in a foot note,\* *goor* is higher priced now than it was then by more than 50 per cent. Upon this assumption, the old rates compare with those that are to rule for the remainder of the century as follows:

Assessment in 1822-23, (allowing for difference in price,) Rs. 67½ per beegah	15
New assessment 1871-72	15

No one will be so silly as to suppose that we are pinning our belief to an assessment of Rs. 67½. But here is the startling fact—that whereas this land formerly paid 45 Rs the beegah to the State, we are now assessing it for a generation of years at Rs. 15, in spite of an admission on the part of the settlement officer that there has been a rise in the price of agricultural produce of 50 per cent. within the last 30 years. An assessment of Rs. 45 may possibly have been a little too high, but we entertain a very strong conviction that it was a low assessment to have imposed to-day. And this brings us to a further illustration of the looseness—they call it "moderation"—with which all matters connected with these proceedings are conducted. Page 29 of the Report is devoted to a record of the prices of the staple products of the districts ruling therein throughout the ten years immediately preceding the settlement. A more glance at the table suffices to show that in this shape it is useless, and that it consists of two well-defined and distinct periods, viz, the four years preceding, and the six years of, the American War. Mr. Beyts lumps the whole ten years together, and then gives as the average prices of the period (1857-66) the following figures:—

Bajree	37½	seers per Rupee
Jowaree	37½	" "
Rice	46	" "
Goor	144	" "

Nothing could be more misleading. The real averages are —

	(4 years) 1837-61	(6 years) 1862-66
Bajree	49½ Seers.	29½ Seers
Jowaree	49½ "	27 "
Rice	35 "	38 "
Goor..	2½ "	10 "

Thus for the long period of six years immediately preceding the new settlement, prices of all descriptions of produce were nearly double what they were in previous years. Now the mere fact of these six successive harvests selling for prices so extreme, was sufficient of itself to justify the imposition of an assessment of an appreciable weight. Mr. Beyts should have been required by the reviewing officer to prepare an estimate of the value of these harvests. Had there been instead, six years of drought, or of low prices, every prominence would have been given to the fact, and justly, as a ground for ameliorating the new rates. But you cannot find a trace in these proceed-

\* Range of Prices in the staple cereals 1817-1863.

	Bajree.	Jowaree.
Prices falling	1817 to 1822 ..... 17 4 Seers	20 Seers
	1827 to 1845 ..... 38 0 "	34 "
	1847 to 1849 ..... 38 0 "	42 " (lowest point)
Discovery of the gold fields and exports of Bullion.		
Prices rising	1850 to 1860 ..... 34 0 "	30 Seers.
	1861 to 1863 ..... 35 5 "	34 5 "
	1864 to 1866 ..... 35 5 "	34 5 "
	1867 to 1869 ..... 35 0 "	34 5 "

ings of any regard for the preservation of State rights, or respect to State necessities and policy, although the very next step that has to be taken after this folly is an Income-tax! We abandon the rent to which we are entitled, and which we are bound by considerations of policy to exact, that we may slap the irritating blister of an Income-tax upon the people in its room. Upon a full and careful review of all the circumstances attending this settlement, we have no more doubt than of our existence that the State might have taken, and ought to have taken, 10 to 15 lakhs a year from the district in place of Mr. Beyts's 3½, with nothing but advantage to all interests mixed up therewith. The ruin of it is, that every settlement of this *Soopa* order so demoralizes the people that the imposition of just rates afterwards becomes impossible, while the authors of these proceedings regard the work of their hands with a self-complacency that irritates clear-sighted men beyond endurance. All the mischief that it is in the power of their hand to do, they do, and then smile blandly over their work with a calm sense of superiority suffusing itself over every page of the records of their folly.

The almost incredible looseness which these "moderate views of assessment" have introduced into the conduct of the department, receives a fair illustration in para 24 of the Report which professes to deal with the profits of farming in the talooka—

"The classers were instructed to work out profits in two or three farms in each village, and to be as independent as possible of the villagers for information. I submit a statement which may be accepted with some slight degree of confidence. I only took the liberty of altering the estimated price at which the unrefined sugar was stated to have been sold. The patel gives a rate of 3 Rs per maund of 40 seers, while the market price in Nowaree that very year was 6 Rs. I have assumed 4 Rs to be a very safe rate, and in doing so make a difference of 55 Rs in the profits confessed as having been derived. The example is given below.

"A farm in Jullalpool of 24 beegahs, of 14 acres, 3 beegahs of which are under rice and sugar-cane, Government assessment, inclusive of local fund cess, Rs. 89½, average rate 6 Rs 6 annas per acre—

Detail	
1 Beegah sugar-cane, yielding 85 maunds unrefined sugar at Rs 4 per maund	Rs 340
2 Beegahs rice and a second crop of kuthul 78 maunds in husk	95½
	Rs. 435½
Cane-head and straw sold for the use of milch cow in Nowaree	17½
	Total produce of land Rs 453
5 Beegahs kuppas 25 maunds price realised	Rs 75
6 do Jowar 42 do 42-1½ for karbee	56½
1 do Toor 4 do	14
1 do Ajmo 10 do	12½
1 do Toor 4 do	6
1 do mixed jowar and castor oil, 3 maunds	3
6 do undergrass	48
	Rs 214
	Grand Total value of produce Rs 667½

Deduct expenses	
Manure	Rs 35 0 0
Seed	44 11 6
Repair of instruments and deterioration of	32 0 0
Cattle at 10 years purchase	00 0 0
Cultivator's own wages	00 0 0
Labourer's wages and cost of making the unrefined sugar	221 7 0
	Rs 381 2 6
Balance	279 11 6
Government demand	10 12 0
	Not profit 190 1 6

equal to a clear profit of Rs 13 8.5 per acre, after the cultivator has deducted his own wages at the market price for labour."

The patel wanted of course the profits calculated upon the assumption that the price of *goor* was Rs 3 per maund. The settlement officer knows it to be Rs. 6, but carrying out the "moderate" views of the department, assumes it to be only Rs. 4. Of what earthly use are statistical enquiries carried on in this fashion? We may conclude that every item of produce in the account was calculated in the same "moderate" way—the result being that the net profit, or in other words, the rental which the officer might have taken but did not—was any amount per acre from Rs. 200 up to Rs. 600. The officer indeed admits all this, and prides himself upon it. In para 26 we read—



"Another criterion in the matter of farming profits in Soopa, is presented by what is imposed in the border districts of Nowwaree and Gundavee, where Rs. 8 the beegah, or Rs. 14 the acre for jorayat land, is a very common rate; whilst the average assessment in the best villages of Soopa does not exceed Rs. 4½ the acre. This enables us to deduce the following argument. If the Guicowaree ryot can manage to obtain profit from land, assessed three times higher than Soopa land of equal quality, our Soopa ryot must pocket the value of two-thirds the 14 Rs. or 8 Rs. more than what is sufficient to keep him as well off as the Guicowarian. The same argument applies to rice and garden land, in which the Guicowaree assessment is about three times higher than what is levied by our Government. This comparison is not however made with the view of urging on the rack-renting principles acted upon by neighbouring States; but only to justify a slight enhancement of the revenue, in proportion to the increased value of all field produce since the last adjustment was effected in less prosperous times."

The passage is a striking illustration of the maudlin spirit in which these proceedings are carried on. The settlement officer so accurately reflects the spirit of the times, that he feels it necessary to *apologise* "for a slight enhancement of rates," by his own shewing abandon almost the whole rental to which the cultivator, while that administrative sinner—the Gaekwar of Baroda—is once more held up to departmental scorn.

But there is another way in which it is easy to shew the needless sacrifice of revenue that these proceedings involve. Tabulating the figures scattered up and down pages 16 to 27, the assessments of the 50 years preceding the new settlement were as follows:—

	Asses.	Assessment.	Rent per Acre.
1817-18	— 37,823	— Rs. 207,257	— 7 10 9
1823-23	— 36,001	— 253,934	— 7 14 2
1832-33	— 43,117	— 230,916	— 5 7 4
1837-38	— 45,108	— 201,532	— 4 7 6
1844-45	— 46,083	— 226,536	— 4 15 9
1847-48	— 46,235	— 232,200	— 5 0 0

The assessments of 1837-38 and 1847-48 represent the actual collection in those years, and 1847 was the period of the very deepest depression of Indian agriculture. The great staples of bajree and jowaree had steadily fallen from 17 and 20 seers the rupee in 1817-18, to 35, and 42 seers respectively in 1847. Observe, however, that in spite of this immense fall in the value of produce, the cultivated area steadily extended itself, and an average rate of Rs. 5 per acre was *actually paid* by the ryot in the year 1847, the year of deepest depression. Observe, also, that Mr. Beyts himself avows his belief (para 52) that the rates at this time were "not at all oppressive." Is it not incredible then, that the man who volunteers this statement should—after the vast revolution that has since taken place, and when a railway has gone right through the district, and prices are double and treble what they then were—should deliberately propose, and that Government should deliberately approve, the fixing of the assessment for the next 30 years at this very rate of Rs. 5 per acre; a rate which Mr. Beyts himself declares was "not at all oppressive" at the period of the ryots deepest distress. A sacrifice so needless, so astounding, defies criticism. An average rate of Rs. 5 per acre was "not at all oppressive" 30 years ago, when prices were but a-third of what they now are, *therefore* let us fix them at Rs. 5 for the next 30 years. We are not travestying the report; we are stating simple facts. The rates of 30 years ago, ere the Baroda Railway or American War were dreamed of, and when money was one-third of its present value in India, are to be the rates for the next 30 years. If the rates were "not at all oppressive" in 1845, we wonder what they are to-day, and what they will be at the end of the leases in the year 1900.

Mr. Beyts is at pains to assure us (para. 75) that "from the date of Mr. Liddle's revision, Soopa has been a very moderately assessed district." Now that revision was made in the year 1837-38, ten years before prices reached their lowest level. Again (para. 82) that the rates imposed by Mr. Pelly in 1844-45 were "not at all oppressive," although even then prices were still falling; and, lastly, (para. 101) we are assured that "the market value of rice has risen three-fold throughout the country since the last settlement in 1838." Was it not then an outrage upon common sense to propose in 1865 to fix the assessment for a generation of years to come at abnormally low rates sanctioned, because of the poverty of

the people 30 years ago? For virtually *that* is what has been done. The result is that the new leases have made the occupants of this exceptionally valuable soil its owners. The State right to the rental—in the magnificent spirit which characterises these absurd proceedings everywhere—has been made over to the cultivator, who, as the result finds his lease not unfrequently saleable for 1,000 Rs. an acre. Our readers, we suppose, are aware that £50 is a long price to give per acre in England for a freehold farm. There is but one word for such proceedings—and regard to the interests being compromised thereby compels us to use it—they are simply *Idiotcy*. All this commotion in the Legislative Council of Bombay about new taxes, and all these diatribes of the press, have respect simply to the need of raising about ten lakhs of revenue, which the men deputed to settle the land revenue of this spot of land lying along the Baroda Railway have permanently sacrificed that amount every year in this single talooka alone; and then dare talk of Wingate and Goldsmid as their forerunners. Had either of these clear-headed men been at the head of affairs, they would have torn the Report into rags, before they had got through its first ten pages. We trust we shall be forgiven for this passion. What are we to do? The Government must be awakened, or financial ruin will be upon us before we know where we are. We are strongly disposed to think that these 30 years leases have for the present done their work; and that in renewing the settlements they should run for shorter periods, say for 12 years only, instead of 30. If some adequate action is not taken to arrest these proceedings, the State, before the close of the century, will have effected a revolution in the traditions and convictions of the people which will make it impossible for us ever to assert the rights now wantonly and from sheer incompetency being given to the winds. The final result of these proceedings is that the 60,000 cultivated acres of which the talook consists, are assessed at no more than Rs. 3,33,894 a year, although the land is virtually all garden, and in the immediate neighbourhood of immense markets; a railway that has cost the State £25,000 a mile goes right through it; two rivers and numberless streams water it; the sea supplies the people with abundance of fish, while "a multiplicity of tanks, kutchas and pukka wells, keep the land under "a succession of luxuriant crops of which rice and sugar-cane "are the chief." There is probably no spot in the world of the same area which produces year by year so rich and varied a produce. And these 60,000 acres of land, the true rent of which over large tracts must be anything from Rs. 150 up to Rs. 300 per acre, is leased for 30 years to come at the ridiculous rate of 11s. "under the moderate views of assessment" which the department holds. Mr. Beyts makes no attempt to estimate the value of the harvest of the talooka, and the omission passes without one word of comment from the gentlemen who reviewed his proceedings. We are simply told that the talook consists of

Rice and garden crop —	— 5,998 Acres
Jorayat —	— 147,597
	<u>55,595 Acres</u>

Although Mr. Beyts gives us no estimate of the total produce of the talooka, the Report furnishes us incidentally with means of making an approximate valuation of the harvest by the data given in para. 24. A beegah of sugar-cane with *goor*, at Rs. 4 per maund, yields a gross annual produce of Rs. 345; a beegah of rice about Rs. 52½; and a beegah of jorayat land about Rs. 10. From para. 13 we learn moreover that the talooka consists of

47,000 Acres of Jorayat Land
10,000 " Sugar Land
5,980 " Garden Land

Now as the acre is equal to 1½ beegahs, the gross produce of the talooka, if we may rely upon para. 24 and 31—as there is no reason to doubt we may—will stand thus:—

5,980 Acres of Garden	Rs. 345 = Rs. 2,069,100
10,000 " Sugar	Rs. 52½ = 5,25,000
47,000 " Jorayat	Rs. 10 = 4,70,000
	<u>Value of gross produce. Rs. 3,264,100</u>

But Mr. Beyts himself points out in para. 24 that he has estimated the price of the poor at Rs. 4 per masund, while he knew it to be Rs. 5; at this latter rate we should have to add eighteen lakhs more to the value of the harvest. Now in view of these figures—taken be it remembered from the report itself—the annual harvest and the assessment compare thus:—

Annual harvest	—Rs. 23,52,530 (to 71 Lakhs)
Total assessment including alienated land	—,, 5,61,574

These figures admit of some modification on account of the 6,000 acres of alienated land in the talook, and the silence of the Report as to the exact quantity of land under cane. They represent correctly, however, the general condition of things to which this assessment has reduced matters. We are at a loss to imagine what excuse the Settlement Department can plead for such folly. They cannot lay the blame upon the authors of the settlement; it is all their own. The truth is the Settlement Departments seem all to have their breath taken away the moment the assessment passes from a few annas to a few rupees the acre, while the spectacle of a native ruler standing by the old fiscal system of the country and making the land defray the burdens of the State fills them with astonishment and indignation. There may be some over-assessment under the Gackwar. We are infinitely more sure that our rates are absurd, and the department needs to be rudely shaken out of the sentimental mood into which it has got. The department seems to have but one idea—to take a quit-rent from the soil and obliterate all memory of the State rights from the minds of the people. We cannot let these rights die out of the people's mind without ruin.

The possibility of proceedings of this order under the Bombay settlement system, which leaves the assessment all but absolutely to the discretion of the settlement officer, suggests the necessity of our adding thereto some definite rule, such as the half-assets rule in similar proceedings in the North-West Provinces. The fact that lies upon the surface of Mr. Beyts's proceedings is the absence of all principle or rule of guidance therein. If you enquire on what principle did he fix the assessment at Rs. 3,33,000 there is no answer. The amount bears no relation either to the produce or to the rental, to the gross or to the net assets. Mr. Beyts proposes Rs. 3,33,000, as another officer in his room might have proposed twice that amount, or only one-half. *There is neither rule nor principle of any land for determining the amount of the assessment.* Everything is left to the discretion of the settlement officer. If he is a fool, the chances are that the settlement will be ridiculous, but under no circumstances is it likely to err, on the ground of severity, the department having got into a maudlin mood of coaxing the cultivator to consent to pay something. We can well imagine George Wingate's, or poor Goldsmid's astonishment at such proceedings as this Soopa settlement claiming to be done under the authority of their names who laid it down that "the chief design of a revenue survey is the regulation of the customary land-tax so that it shall secure an adequate revenue to Government, the progressive development of the agricultural resources of the country and the preservation of all proprietary and other rights connected with the soil."—(*Joint Report, 2nd August 1847*). Let the reader observe the words we have italicized. The "customary land-tax," "an adequate revenue to Government" and the "preservation of rights." Will it be contended that Rs. 5 an acre represents the customary land-tax of this country in such a district; that it represents the State rights therein, or an adequate revenue therefrom? We write for the purpose of exciting Government to definite action. We suggest to Sir Seymour Fitzgerald in particular, who has we know neither sympathy with, nor complicity in these proceedings, that he would do well to require every settlement report submitted to him to estimate with care what the rental of the district is, and to point out also what a half, or two-third share therein would represent. 60 or 70 per cent of the rental would be a liberal assessment throughout the Western Presidency, where the State deals directly with the cultivator, and neither malgoosar nor semindar exists.

Instead of 60 per cent we have taken about 6 in Soopa apparently, at a loss of not less than half a million sterling before the close of the century in these 30 miles of territory alone. And the Baroda Railway has yet to be paid for!

A good many Englishmen, if we mistake not, would be glad to turn cultivators on terms such as those granted to this talook. It is not the poor hard-working ryot after all who gains by this folly, but too often a fellow who is too proud to work, and who has no need to work, but reserves his powers for the sensual life of the harem (see para. 39) and contrives to get handsomely paid for his exertions even there. Instead of forcing these men into the dignity of honest work, or giving the occupancy right to others, we have adopted "moderate views of assessment" as our policy. Policy! Why every man mixed up in such proceedings is next door to wanting a strait-jacket. We are at our wit's end for money, while the State rights in the soil are made over to a race too often of sensual scoundrels, to whom the Commonwealth if it owes anything at all owes a tying up at the triangles. The reader must forgive this anger. We should explode if we did not let off the indignation which we feel at such proceedings, while not a man under whose review they passed seems to have been aware of their real nature. The climate appears to destroy all nervous force in official men, and they go mechanically through their work without a symptom of comprehending what is put before them for sanction. And this leads us to remark once more upon the folly of keeping such proceedings from the public, until the time has gone by when criticism can be of any use. The very existence of these proceedings was unknown to us until the other day. When will Government learn the necessity of admitting the public into its counsels? Half a million of money has been absolutely thrown away in this single small talook alone, for want of intelligent criticism upon what was being done.

How can we expect good government when State measures are subjected to no independent criticism? Let the Government itself say, whether it would not have been better had this article of ours, instead of following, gone before its decision. The mischief is now remediless, but a sharp income tax might be levied, with perfect justice in Soopa, to undo to some extent the error that has been made. We can only say that if Government can induce any one of the luxurious gentlemen described in para. 39 to give up his land to us upon the terms of this settlement, we shall deem it no hardship to pay a very heavy income-tax indeed. A farm of 100 acres in this Soopa district must be worth £100 a year to the occupant, in spite of the assessment, and if Government is going to give the land away in this fashion, the townspeople ought to know it, and be allowed to bid for the occupancy rights so created at the expense of the Commonwealth. We close with a single fact concerning the actual value of land in the talooka. In some parts of it, says Mr. Beyts, "the occupancy rights, if mortgaged or sold, would realize as much as Rs. 1,000 the acre" (Para 18, Supplementary Report, January). A very fair proof, indeed, of the character of the assessment. The land is supposed to belong to the State, while the ryot can get £100 an acre for the occupancy right alone. In other words, the land is leased at a quit-rent of six pence per acre, while the State is embarrassed for means. Matters have come to this pass that we seriously advise our fellow-townsmen to go in for the land. It is being literally given away, and they will be unwise if they do not look after a share of it.

#### INDIA MUST NOT BORROW

INDIA must not borrow. England may, and France, and Germany, and Russia, and Italy, and Spain, and Mexico, and Greece, and Turkey, and Timbuctoo. New Zealand also, and Australia, and Canada, and the Cape, and Ceylon, and Mauritius, and the dirtiest little dependency the nation owns, in any of the four quarters of the world. But India may not. And if you ask why she may not, the answer is that the people of England

have undertaken to administer her finances, and that to prevent all question as to who may be responsible for the possible bankruptcy of the country under their management, they have resolved that she shall not borrow at all, even though they garrote the country by their resolve. Now it is an indecency for any nation in the world to borrow, if this land may not. We pointed out in our last issue, that while our own country and other lands are steeped to the lips in debt, and depend wholly upon taxes to meet their engagements, India is not merely free from debt, but has a vast national estate in the land, that at once justifies and necessitates her borrowing largely of foreign capital for its improvement. A more mean or unworthy policy was never followed by one nation towards another than that which the English Ministry has deliberately adopted towards this land. As the whole world knows, the so-called Indian debt of £100,000,000, from the way in which it has been built up, would be promptly declared an English liability in any court of equity in the world. It is an English debt from beginning to end, incurred by a dishonest trustee in the name of his ward for purely personal advantages of his own. Having considerable misgivings as to the proper incidence of this debt, and India's power to sustain it, it is now discovered that the right policy is to lay down the maxim that "India must not borrow" at all. While all other countries of the earth may borrow as freely as they please of English capitalists even for war purposes, India, the poorest of them all, whose fortunes God has given into the hands of the wealthiest nation of the world, is to look to her taxes for the construction even of the roads and tanks, for want of which the people by reason of famine, periodically perish by millions. It was in the Budget Speech of 1860 that this precious doctrine was first formally laid down, and the policy then inaugurated has been strictly followed down to this hour, although all belief in it is exploded. During the ten years that have intervened, a large amount (about £8,000,000) of Indian debt has been extinguished out of Indian taxes, and in one painful way or another (by an income-tax in part) we have been made to spend 50 or 60 millions upon roads and railroads, electric telegraphs, tanks, and canals, while at home it has been the height of financial wisdom to build their fortifications out of loans. Because we have not had the courage to deal honestly with the existing Indian debt, therefore India shall not be allowed to contract any fresh one. If she wants roads, let her build them out of taxes. No matter that English capitalists would gladly lend her what money she wants at 4 per cent.—take the money out of the pockets of the people, where it is worth 50 per cent, or in any way you can get it, that the growth of a large Indian debt may not make Parliament uneasy. There is no Government on earth which may, with such propriety, borrow money for works of public improvement. We have been ready enough to borrow in India's name for the conduct of the wars we have forced upon her, that we might evade their cost, but to borrow for purposes that may rescue her own children from perishing of famine is not to be heard of. The principle we have ever contended for is simply that works of a reproductive nature should be constructed from capital borrowed in the cheapest market, while Government has laid it down that "India must not borrow." In accordance with this maxim, a great effort has been made, year after year, to raise by taxation a surplus revenue of six or seven millions to meet the wants of the country. It has been a ruinous economic error. Do we want proof that it is false economy to take money out of the pockets of a people, where it is worth 15 to 50 per cent. per annum, owing to the scarcity of capital amongst them, to invest it in roads, with indefinite loss in the transfer, when we may borrow for the purpose as much as we please at 4 or 5 per cent. in the English market? All other nations may borrow of English capitalists what they please; India alone is shut out from them, and forced to construct the works of improvement for which she languishes, out of dribbles of savings from her annual income; or to go without them.

Take an instance or two of the slowness of the State to apprehend the importance of the principle at issue, as seen in the

mode of financing followed in the construction of the new India Office and the transport ships, and see how ruinous is the mode in which the funds were raised. In both cases the same course was followed. The money (nearly £2,000,000) was drawn from the Indian Treasury by means of the Secretary of State's drafts. In other words, while English capitalists would gladly have lent the amount upon the security of the Indian revenues, the India Office deliberately preferred to draw it from the Indian taxes. It is not enough that India is made to furnish the money with doubtful propriety, but she is made to do so in the most oppressive form. While her people are perishing by millions from constantly recurring famine, we take from her Treasury two-thirds of a million sterling to put up a palace in Downing-street, and a million more to build a magnificent transport fleet in our dockyards. What these two millions would have done for any district of India let Sir Arthur Cotton tell us.

India may not borrow; every other nation may. And yet look once more at their respective positions. India then has an existing debt of 13/4 per head of population. This debt moreover is not her's but England's, but for the argument we assume it to be her's—

#### INDEBTEDNESS OF NATIONS.

	£	s	d.	
India .. .. .	0	13	4	per head of population
United Kingdom .. .. .	35	16	0	"
France .. .. .	33	0	0	"
Holland .. .. .	13	1	4	"
United States .. .. .	17	15	5	"
Portugal .. .. .	9	11	6	"
Austria .. .. .	6	14	10	"
Italy .. .. .	7	19	3	"
Switzerland .. .. .	10	4	6	"
Greece .. .. .	9	15	5	"

Now all these lands but India depend wholly upon taxes to meet their liabilities. India alone of them has a vast national property in the soil, and a lien upon China for £7,000,000 or £8,000,000 a year. And she of all these lands may not borrow at all, although if we will but give roads and water to her estate, we shall increase the capitalized value of her property by a thousand millions sterling. We have pattered with the question like selfish cowards all these years, and are pottering over it still.

#### THE NATIONAL INCOME.

##### £2 OR £6 PER HEAD.

THE statement of Mr. Grant Duff that the average income of the people of India is about £2 (two pounds) per head per year, furnishes a fair illustration of the delusions under which the government of this country is carried on. It seems to be impossible for Indian statesmen to get abreast of their times. Thirty years ago, it is possibly true, that the average income of the people was not more than £2 per head per annum. To-day it is ridiculously false. It seems impossible to make men understand how vast a revolution has taken place in the country since the discovery of the gold-fields. If two pounds per head per annum be the average income of the people, the amount of course must include the expenditure and accumulations of the rich. As British India comprises a population of about 150 millions of people, £2 per head represents a gross annual income of 300 millions sterling a year. But 900 millions sterling a year simply means one million of men with an average income of 250 Rs. a month each, and a family of 150 persons to maintain out of it. While these gross delusions exist, there is no hope of enlightened rule in the country, and there is no excuse for their existence. On what possible data the India Office has arrived at Mr. Grant Duff's conclusion, we cannot even imagine. It knows well the cost of rationing the army, the jails, and the schools in every part of the country; the price of the staple articles of food; the amount of the country's exports; the luxurious standard of living amongst the wealthier classes of the people; the general comfort even of the poorest; and the accumulation of wealth by the cultivating classes; and yet with all these data in its hands for a reasonable estimate of the income of the

country, the Secretary of State gave the statement that it is about 28 pence per head per year, without attempting any estimate of costs upon the subject. Observe the following figures, which are under our notice while we are writing. Bombay has several great orphanages for children of European and Hindustani extraction; the dressing is provided by contract, and the cost of food alone in these institutions is as follows:—

Bycullah Schools ..... Rs. 10 5 6 per child per month.  
Scottish Orphanage ..... 13 4 8 " " "

Including clothing, establishments, and general charges, the cost is:—

Bycullah Schools ..... Rs. 21 8 5 per child per month.  
Scottish Orphanage ..... 31 1 4 " " "

The contract rates at which the Bycullah Schools were supplied in 1869 were:—

Wheat .. ..	per lb. Rs.	0 2 9	or	4 pence	per lb.
Barley .. ..	"	0 4 0	or	8 "	"
Milk .. ..	per seer	0 2 10	or	4 "	per pint.
Potatoes .. ..	per lb.	0 1 9	or	2 1/2 "	per lb.
Vegetables (cabbage)	"	0 1 9	or	2 1/2 "	per lb.

A glance at these figures will show Mr. Grant Duff that in Western India at all events, the cost of living is very little below the English standard, and yet while the average annual expenditure is nearly £30 per head there, he dreams of £2 per head per year sufficing here. These delusions must give place to exact knowledge, if we are to have enlightened rule in the country. The mere cost of food in the prisons of India during the last year was as follows:—

Madras .. ..	Rs. 45 8 1	per head per year.
Bombay .. ..	" 29 1 0	"
Bengal .. ..	" 27 5 1	"
Calcutta .. ..	" 43 5 0	"
Delhi .. ..	" 28 0 0	"
Punjab .. ..	" 36 8 4	"
Central Provinces ..	" 51 8 8	"
Average .. ..	Rs. 33 7 0	

These returns have respect to native prisoners only, but include females and juvenile offenders, the diet of the non-labouring as well as labouring prisoners, and the penal diet of the refractory. Not an item of luxury does the scale include of any kind; neither sugar, nor fruit, nor pan, nor betel, nor tobacco, nor opium; while the supplies were in every case obtained wholesale under contract. And yet the average cost per head of the prison diet throughout the country was just £4 per year; while Mr. Grant Duff has been assured that the total average income of the people, including the expenditure of the rich and the annual accumulations of all are covered by an income of £2 per head per annum. The mere rationing of the European troops in Madras costs £12 per head per year; in Burmah £17 to £18. In view of the prosperity of the agricultural classes, the income of the country at this moment is little, if anything, below the aggregate income of the United Kingdom, viz. 800 to 900 millions sterling a year; but then 150 millions have to divide it instead of 30 millions. In other words, our impression is that the average annual income of the people of India is about £8 per head against the English average of £30.

#### WANTED A REPUBLIC.

THE workmen of England are pursuing a shadow when they demand the substitution of a Republic for the ancient monarchical forms of the Kingdom. England has long ceased to be a kingdom in everything but name, while no Republic in the world is so happily constituted. Do English workmen really believe that it would be an improvement upon our institutions, to elect our Chief Magistrate every four years after the American fashion, and to entrust him with the powers wielded by the American President? By a constitutional fiction, the executive powers of the Kingdom are supposed to be vested in the Crown, although the sovereign cannot personally appoint even a parish constable. Instead of an irresponsible Parliament appointed for an arbitrary term of years, and wielding immense powers for good or evil, the English constitution has his upon the happy expedient of a Parliament, whose every step is made in the noon-day glare of public and parliamentary observation, and who is removed from

power the moment he ceases to command the confidence of the people. There is no comparison between the two systems, and to reject the institutions of our own land, for the semi-despotic personal rule of an American President, with all the disadvantages and drawbacks which attend the system, would be a purely retrograde step of the most calamitous order. Upon the whole, the English constitution is undoubtedly the happiest compromise the world has ever seen between strong government and popular rule. That it admits of improvement is simply to say that it is human. Thus it would be an undoubted gain we think to the country to remove the bishops from the House of Lords. The bishops represent no one but themselves, and the full and complete proof of the propriety of removing them is the fact that, as a body, their influence is always thrown into the wrong scale. You never find the bishops, as a body, voting upon the right side. We believe it to be historically true, that their influence has ever been unhappy and retrograde, and this fact of itself is sufficient ground for their exclusion. For the inference is irresistible that they are in a wrong position. Bishops are no worse than other men; they ought to be, and upon the whole, we believe that they are, very much better. If, then, you find their action in any given sphere uniformly disastrous and unhappy, you may be sure there is some fault in the order of things which requires them to act within that sphere. The great Bishop Wilson ever declined to take his seat in the House of Lords, believing it to be impossible for a bishop to take part in its proceedings with advantage either to the Church or to society. And experience confirms the truth of his conviction. The influence of the bishops upon the course of legislation has ever been unfriendly to liberty and reform. But one prelate of the whole Bench throughout the American War of Independence ventured to raise his voice in deprecation of the violent proceedings of the Government of that day, while the Ministry has ever been able to count upon the support of the body in resisting the demands of the people for reform. Upon the dreadful question even of slavery, the great laymen of the Commons had to overcome the resistance not merely of the temporal but of the spiritual Lords, whose sympathies in that character by some unhappy fatality seem never to be right. The sooner the House of Lords is rid of them the better. It is also an important question whether the Upper House might not with great advantage be strengthened by the creation, upon a somewhat extensive scale, of life-peers. There is a manifest danger of the Commons becoming so powerful as altogether to swamp the influence of the Upper House. Let the House of Lords be strengthened by throwing open its doors freely to the ablest and most cultivated men of the age. Just in proportion as the Commons increasingly reflects the power of the plutocracy of the country and of the working man, is it desirable that the Lords should increasingly reflect its culture and intellect. The Lords want popularizing, and there is a way in which this could so certainly be done, as by the elevation to their body of distinguished laymen as life-peers. We may popularize the Commons to the full extent the million desires, if we but simultaneously strengthen the other House with the most cultivated men of the time. Intellect will ever win in the long run, and we should have no fear either of the workmen or the capitalists of England, if the doors of the House of Lords were thrown open to the great men of the time. Who can doubt that men like Seeley, Ruskin, Paget, Huxley, Newman, Mill, the Members of the Indian Council, and the Heads of Colleges, were it possible for men of modest fortunes to sit there. We want no revolution in England—no Republic—other than that we have. We want simply a development of existing institutions, towards which every wise man will labour according to the light that is in him. If the clergy are to sit in Parliament at all, it should not be as bishops but as learned men, and Presbyterian and Nonconformist clergymen should be just as eligible as Churchmen.

## EDITORIAL NOTES.

A GENERAL idea of the comparative cost of living in the provinces may be got by averaging the prices of the staple cereals throughout the country. The averages for March were :—

<i>Rice, the Staple.</i>			
Bengal	—	—	Seers 22 per Rupee
Madras	—	—	18 "
<i>Wheat, the Staple (of the better classes.)</i>			
Bombay—	—	—	Seers 8 per rupee
Central Provinces	—	—	18 "
Punjab	—	—	18 "
N. W. Provinces	—	—	18 "
Oudh	—	—	22 "

The returns for April shew an average rise of at least 2 seers per rupee for wheat and jowaree throughout Central and Northern India. We shall have no "poor" therefore for a season, and may direct all our attention to administrative reforms.

A LOCAL contemporary declares that "it is both unjust and absurd to ask England to make herself responsible for the debt of India, in order that India may take such security into the market and discount it to her own advantage."

Who ever asked for anything of the kind? We have demanded an Imperial guarantee for the debt, on the ground (1) That in *equity* it is not an Indian, but an English liability; and (2) That in *policy* the safety of both countries requires that we should reduce the interest to the lowest possible amount. Who can be so silly as to imagine that we ask a guarantee for the debt at the *present* rates of interest? We require the guarantee that we may reduce the interest, as a matter of economy for India and of sound policy for England.

THE Bombay Association petition Parliament for reform in the administration of Indian finance, and pray it :—

"(1.) To direct the Executive Government of India to reduce the public expenditure, totally to abolish the Income-tax, reduce the recently enhanced salt tax and other imposts which press heavily on the people, and prohibit the imposition of fresh taxes for imperial or local purposes ;

"(2.) To provide a permanently efficient check upon the increase of public expenditure and taxation in India ;

"(3.) To devise suitable measures for curtailing the overgrown and excessive expenditure of that department of the Indian Treasury which is under the immediate control of the India Office in England, and to provide an efficacious check against its increase by prescribing definite limits for the principal charges which should not be exceeded without obtaining the previous sanction of Parliament ;

"(4.) To relieve the Indian Treasury of charges which ought to be defrayed wholly or in part by the Imperial Exchequer; and

"(5.) To grant an Imperial guarantee for the public debt of India under such conditions as may be necessary to secure to the public the saving to be made thereby."

MR. PEDDER'S Report regarding the consumption of salt and the revenue derived from it in the Bombay Presidency is a most valuable State paper. Mr. Pedder has arrived at the conclusion that the average consumption of revenue-paying salt in Bombay is 10½ lbs., and the pressure of taxation 3 annas. 8 pies per head of the population. He estimates the actual consumption at 14 lbs. per head, showing a large resort to illicit salt. The total quantity smuggled he estimates at upwards of 800,000 maunds, and the loss at more than fourteen and a-half lakhs of rupees. He has shewn that the quantity of salt annually leaving the island of Bombay by railway, exceeds the whole amount professed to be received into Bombay, so that in the island itself alone the loss from smuggling is believed to exceed 2½ lakhs a year.

A CORRESPONDENT of a local journal declares it to be a fact that for every Rs 16 or Rs 18 invested in manufactured opium at Madras, consignees of the drug at Rangoon readily obtain Rs. 36 to Rs. 38, and states his belief that every steamer from Madras and Calcutta takes a quantity of the drug to be smuggled ashore. "It is useless for Government to depend upon the 'detectives of the opium farmer; for, although it is his interest to have other smugglers arrested, the possession of the drug is

"of far more value to him than the fine to which he is entitled, while the quality of the drug is superior to what is manufactured by himself. Hence the new instances of smuggling brought to light, while the farmer pleads his inability to consume the quantity allotted to him by Government."

That there is a vast amount of smuggling in our Absarnee and Salt Departments there can be no reasonable doubt. Mr. Pedder has just demonstrated the existence of salt-smuggling in the island of Bombay upon a scale quite heroic.

MR. BROWNLOW (Cachar) writes to the Agri-Horticultural Society that a silk-worm identical with, or very closely resembling, the Bengal *Attacus Atlas*, is found in a wild state in Lombardy, or at all events in some part of the peninsula. If not the veritable Bengal *Atlas*, it is very much like it, and holds a very close relationship to it. "Perhaps it would be as well to find out on what this wild Italian *Atlas* feeds, and to try the Bengal worm on that plant. I do not think the Bengal cocoons will burst in the climate of Naples earlier than May or June, so that there is still time to advise the experimentalists. Any body may find the wild Italian indigenous worm above referred to, by looking for it among the cases of insects belonging to the Fauna of Italy, preserved by desecration, in that department of the Museum at Florence devoted to this branch of science. Whether there were any details attached to the specimen explanatory of it, I unfortunately do not remember. I am, however, certain that its place in the Museum has reference to its value as a textile material, but that it is jumbled up with other specimens without, as far as I remember, any regard to arrangement by affinities."

The Secretary has sent the above extract to the Consul-General for Italy.

THERE is a story going the round of the papers concerning Mr. Seward's notes upon our rule, that illustrates the truth we have so earnestly insisted upon as to the needless sacrifice of the land revenue that is going on in the country. Mr. Seward wanted to know of a district officer in the Punjab how it was that a people so turbulent under native rule were so quiet under our own. The reply was :

"Where a native prince takes six rupees, we take two. Out of this district I pay £100,000 to Government every year. The adjoining one to the south is the same size, but its native chief manages to get £500,000 out of it. Even supposing that we were to resume all the rent-free lands, which we have granted for loyal service or for other political reasons, we should only be able to raise £150,000, according to our system, from this district. The cultivators know perfectly well that if they were living even under a good Sikh ruler, they would have to pay three times as much money to him, for they see what goes on a few miles from here on the other side of the boundary line. They prefer to pay less and to accept our rule."

Mr. Seward, we are told, visited this Sikh State to enquire for himself into the facts, and came back satisfied that it is really true "that where the Indian husbandman pays us two rupees, he would pay a native prince six." The mischief is that it is all being done unintelligently. There has been no intention to abandon the land revenue, but practically we have been abandoning it, under the ascendancy of the school which has caused all our embarrassments.

THE ways of our Finance Minister are certainly "far above out of our sight". The following Notification appears in the *Gazette of India* :—

Simla, the 1st May 1871, No. 197.

With reference to the Notification No. 3228, dated 15th December 1869, the Governor General in Council is pleased to grant to holders of the 30 lakhs of debentures payable on the 4th July 1871 the option of having those debentures inscribed as a loan to the Government of India on the following terms :—

1. Promissory notes will be issued for sums of Rupees 500, and for sums above that amount in even hundreds of rupees, the notes will be payable to order, and interest thereon will be paid half yearly on the 4th January and 4th July in each year.
2. Interest will be paid on this loan at the rate of four and a-half per cent per annum during the first ten years of currency, and thereafter, viz. from the 4th July 1881 onwards, at the rate of four per cent per annum.



8. The interest will be issued in form similar to that employed for the issue of the four per cent. loan of 1st May 1868.

9. No part of the loan now announced will be paid off before the 4th July 1881, nor without a previous notice of three months, to be issued at any time after the 3rd April 1881.

5. Applications in writing, from persons who may desire to transfer the amount of their debentures into the new loan, may be made to the Secretaries and Treasurers of the Banks of Bengal, Madras, and Bombay, or to the officer in charge of any Treasury at which the interest on the present debentures is payable.

6. His Grace the Secretary of State for India will be requested to allow similar transfers of any of the debentures held in England.

7. No applications for transfer will be received after the 4th July next.

Thus we have here the Supreme Government voluntarily renewing a 4½ per cent. loan of £3,00,000 *at par*, while the market rate for *four* is 99, and four-and-a-halfs are being quoted at 107. The Cash Balances at the same time are several millions in excess of their normal amount. The effect of the measure is to make a present to the holders of 6 per cent. upon the debentures, and the result will be a loss to the State of one-half per cent. per annum upon the whole amount for the next 10 years.

THE manner in which the revenues of India are misappropriated, for there is no other word for it by the Home Government, will by-and-by be regarded as one of the scandals of our time. It does just as it pleases with the revenues of the country, being under neither check nor control of any kind, material or moral. We have at this moment before us a list of pensions granted in 1867-68 to *employees* of the India Office who retired in that year from active service therein. The list is as follows:—

	Full Salary.	Pension.
Mr. J. C. Mason	— — — £1430	£1430
" E. D. Bourdillon	— — — 1200	1000
" J. N. Dillon	— — — 900	700
" J. E. Cochrane	— — — 1050	1000
" W. C. Deeds	— — — 900	700
" J. Courtenay	— — — 875	700
" J. E. Butcher	— — — 1000	800
" C. Crawford	— — — 850	800
" W. Downing	— — — 500	375
" W. V. Andrews	— — — 303	303
	£28,958	£27,907

The average length of service of these gentlemen was 32·8 years; their average age upon retirement 51·2 years; their average salary nearly £900 a year; and their average pension nearly £800. The disclosure is a scandal upon the face of it. Here are ten men, fairly educated but nothing more, who were fortunate enough to get clerkships in the India Office, at the early average age of 19 years. They lead for 30 years the life which prevails in the public offices of England, and at 50, worn-out we presume by daily attendance at office from 11 to 4, each man gracefully retires from his exhausting labours upon a pension of £800 a year.

Our readers know the general conditions of such service at home, and the scale upon which pensions are ordinarily conferred there. In these circumstances, it is an act of indecency to make these ten men, in the prime of life and the maturity of their powers, annuitants upon the people of India at all. The average age of men in public life in England is nearly 65. Mr. Gladstone, Mr. Disraeli, Mr. Bright, and all the leading men of the Commons, and of the Upper House are of that age, while the India Office exhausts its *employees* it seems at 50. Who dreams in England of retiring from work at 50 years of age! Even in India we have adopted a 55 years rule, and require men to serve 35 years in this climate for a pension of half salary, which pension moreover never exceeds £500 a year; while these pampered gentlemen of the India Office, who do not know what hard work means, and who are in their own climate, retire into graceful idleness at 50 years of age with all but the full pay of their active service. How can we reconcile this unaccountable administration of the trust in our hands, with the declaration of the Duke of Argyll that "we are spending the Imperial revenues of India conscientiously for the good of its people." My Lord Duke, we are not so spending the revenues of India. There is mismanagement throughout our conduct of them and to gloss it over, and conceal it from

ourselves, is but to add hypocrisy to our sin. There is hardly an item in these Home accounts that would stand criticism in the House of Commons, such criticism as the late Mr. Hume would have brought to bear upon it; and until India is better represented in Parliament these misappropriations of her revenues will continue.

Had we the time or space necessary for the purpose, we could tear the accounts to rags, while Sir Richard Temple is assuring the world that they are "all right, and justifiable, and proper." The first Finance Minister who has the moral courage to use the language of stern, uncompromising, rebuke such as the case calls for—language that will make men's ears tingle, and force the dullest to attend to what is spoken—will be immortal.

## THE MILITARY EXPENDITURE OF INDIA.

### COST OF HOME DEPOTS AND RECRUITS.

*Report of a Committee appointed by the Secretaries of State for War and for India to make arrangements for adjusting the Charges for Effective Services of Her Majesty's Regiments on the East Indian Establishment, on the principle of actual Charges.*

THE Committee feel it to be their duty to bring prominently to notice the very heavy charge attending the present system of Indian depots, as shown in the cost to the Imperial Government of a recruit from the date of his enlistment to that of his embarking for India. This becomes very apparent when a comparison is made of the expenditure under the existing system with that of the Warley depot formerly maintained for recruiting the army by the East India Company.

The Committee feel bound to ask the attention of Her Majesty's Government to the expense of the Indian depots, in order that it may be ascertained whether the system on which they are at present maintained could not be greatly modified.

The figures in the Return C. show a cost of about 205½ for each soldier sent by the War Office to India, but this must be modified as regards one or two exceptional years, during which, although the depots remained at their full strength, very few recruits were required for India, in consequence of each regiment in that country having been very largely reduced, but the outlay, nevertheless, appears to demand inquiry with a view to its reduction. Returns A. and B. show that recruits were sent out from the Warley depot for the years from 1850 to 1859 at an average cost of 19l. 15s. per man only, or, omitting the exceptional years of and after the Mutiny, at an average cost of 26l. 7s. 5d. per man for all arms.

It is proper to add that the members of this Committee, representing the War Office, are of opinion that with reference to the statistical statements prepared at the War Office and laid before the Committee, the depot and recruiting charges of regiments in India have been in excess of the amount repayable to Imperial funds as the capitation grant for the corresponding period, thus leaving a deficit to be borne by the Imperial revenue. The members of the Committee representing the India Office are not, however, at present in a position to confirm this view, as they have not had the means of scrutinizing those statements, or of arriving at a definite conclusion as to this point, but the Committee have no hesitation in expressing their unanimous opinion that the charge for a recruit, as shown in the War Office returns, is susceptible of very great reduction, and that whatever loss has resulted to the Imperial Government must be attributed mainly to the excessive amount of the depot charges.

For the reasons given the Committee submit:—That the capitation rate as at present paid shall be continued for one year from the 1st April 1869, and that during that period they should be authorized to consider and report as to the best mode of adjustment of the accounts of the expenditure for future years.

T. L. SEECOMBE.  
G. I. JAMESON.

H. W. S. WHIFFIN.  
JOHN MILTON.

War Office, March 11, 1869.

*Second Report of the Committee appointed by the Secretaries of State for War and for India to make arrangements for adjusting the Home Charges for Effective Services of Her Majesty's Regiments on the East Indian Establishment, on the principle of actual Charges.*

November 24, 1869.

The Committee, in their first report, requested the attention of Her Majesty's Government to the very heavy charge imposed on India, and to the very large difference between the expenditure under the existing system, and that which was formerly incurred by the East India Company, in recruiting their Euro-

pean artillery and infantry. The recommendation of the Committee having been adopted, another Committee, consisting of three officers representing the India Office, War Office, and Horse Guards respectively, was appointed to consider to what extent the depot establishments maintained for regiments serving in India would admit of reduction.

That the Committee recommended certain reductions, but these have not yet been ordered, and their effect cannot, therefore, be ascertained. Under these circumstances, the Committee have not deemed it advisable to attempt to fix a schedule of prices, as it would have to be based entirely on estimate, if the depot establishments recommended in the report in question be adopted, and would require modification, if it should be found practicable to carry reduction to a still greater extent.

They are, therefore, of opinion, that from the 1st April 1870, the claims of the Imperial Government should be adjusted by repayment of the actual charges of the general principles which governed the settlement of the accounts for recruiting depot and other home services, from the year 1824 to the date of the introduction of a capitation rate.

There are, however, certain charges, formerly included in that adjustment, which it would be expedient henceforth to exclude ; the payment under the several heads to be in future made direct by the India Office, viz. :—

- A. - Pay of officers on furlough from India, with the exception of the pay of commanding officers of colonies, should be accounted for by the agents and charged to India, through their accounts with the War Office.
- B. - Advances in this country to regiments proceeding to India which should be accounted for by the paymasters to the local Government in India, the paymasters rendering to the War Office a pay list to the day preceding embarkation.
- C. - Advances to regiments returning to England to be accounted for by the paymasters to the India Office, a pay list being rendered to the day preceding disembarkation.

Advances to drafts proceeding to, and detachments returning from, India should be adjusted in the mode adopted previous to the introduction of the capitation rate.

The Committee would also recommend that the remittances from India by officers and soldiers should be paid direct by the India Office, and that the present charge for agency be revised.

Excluding the foregoing items, the charges which will have to be adjusted on the principle of actual accounts, are detailed in the schedule, Appendix A., and may be classified as follows:—Class 1, direct charges; Class 2, indirect, or assessed charges. There are certain charges shown under Class 3 to which reference will be made separately.

The items in Class 1 do not require explanation.

In regard to Class 2, comprising the indirect or assessed charges, in respect of which India is liable for a proportion only, the expenditure for these services should be charged rateably on the net disbursements occurring in *each* of the several recruiting district and depot battalions, in which there may be recruits for India, with the exception of the charges for barrack accommodation, and for difference of numbers of men on passage to and from India.

The charge for barrack accommodation should be calculated on the average number of officers and men belonging to regiments on the Indian establishment, accommodated in barracks on the 1st of each month.

With reference to the charge hitherto made for the difference of numbers of men on passage to and from India, and to a recent communication from the Horse Guards, respecting the minimum time required for training recruits of the several arms of the service, the Committee are of opinion that the following sums, details of which are given in Appendices B. and C. should, for the present, be charged for every non-commissioned officer or soldier embarked, as recruits for India, with regiments of the line, viz. :-

Cavalry	...	..	..	...	8 45 10 10
Infantry	..	..	..	...	.. 27 7 11

and the Government of India will be entitled to credit, at the same rates, for every non-commissioned officer or soldier disembarked with regiments, who, at the date of disembarkation, shall not be within two years of the completion of his term of service. This adjustment will not apply to drafts sent from this country to India, as India will have paid for them, nor to detachments of invalids or time-expired men returning from India.

Assuming that the expenses of the Indian depots of Royal Artillery will, in future, be defrayed by the Government of India in the same manner as those for depots of cavalry and infantry, the Committee consider that the amount chargeable for every non-commissioned officer or soldier of artillery embarked for India should be as follows, viz. :-

[illegible]

These rates will be chargeable on the number of soldiers with troops or batteries of artillery as relief, and also on such non-commissioned officers or men, if any as may be sent from troops and batteries not belonging to the British army. Their being reimbursed at the same rates as overland troops, or non-commissioned officers, or soldiers detached from troops or batteries, shall not be within two years of the date of their departure from service.

As in the case of regiments of the line, drafts of artillery embarked for India will not be chargeable, nor will India be entitled to credit for invalids or time spent on board.

The practice at present adopted of not counting men who have less than two years to serve, would be prejudicial, and in calculating the number on which the prescribed rates are to be paid for effective men going out on service, with their wives, the number of men left with the regiments and battalions within two years of the termination of their period of engagement should be added to the numbers entering, and, in like manner, the number of soldiers and sergeants of three months' service and upwards, serving with the regiments and battalions, the order was issued for the recall of the regiment from India, should be added to the number of men disembarking in this country with the corps.

The rates at present chargeable for non-commissioned officers of Royal Engineers required for special service in India, as fixed in the report of the Committee which considered the application in March 1867, should remain in force.

The Committee recommend that the above rates, as well as the charges under Class 2, should be subject to revision every three years.

On the subject of these charges a separate minute is recorded by the members representing the India Office on this Committee.

The charges specified under Class 3<sup>rd</sup> having relation to the army generally, have not hitherto been matter of account between the Imperial Government and the Government of India. The question as to the liability of India to bear a proportion of these charges was discussed by the Committee, which arranged the existing Capitation Rate in 1861, and it resulted in the exclusion of those charges therefrom. The subject has again been considered by this Committee; and it appears to them that, in conformity with long established usage, no adjustment is necessary on this account, such proportion of the expenditure for head-quarter departments, general staff, &c., as might be considered applicable to Her Majesty's regiments on the Indian establishment being, in their opinion, fairly compensated for by the advantages derived by the Imperial Government from the presence of Indian depots in this country. On this point, however, a separate minute by the members representing the India Office on the Committee is added hereto.

In concluding their report, the Committee would again refer to the heavy expense of the Indian depots as at present constituted. They are unanimously of opinion that the present rate of expenditure is too large when compared with that incurred prior to the Mutiny in India, and excessive when compared with the charge incurred by the East India Company in the maintenance of their depot at Warley. The Committee are, therefore, of opinion that, without any sacrifice of efficiency, it is practicable to effect a very large reduction in these charges.

T. L. SECCOMBE. G. I. JAMESON, Major-General.  
H. W. S. WHITTIN. J. MILTON.

**SEPARATE MINUTE**

While concurring generally in the foregoing report, the members appointed by the Secretary of State for India to serve on this Committee, feel it to be their duty to represent that they consider that the proposed arrangement is, in one respect, not just towards India.

They are of opinion that, as all expenses of raising, training, maintaining, and pensioning the troops whose services are lent to India are paid from Indian revenues, India is fairly entitled to a considerable credit for the value to the Imperial Government of the presence in this country of the staff and those engaged in courses of training. The troops are available to meet any emergency for which a home garrison is required, and the resignation by the War Office of any charge for a proportion of the expenses of the General, Medical, and Commissariat Staffs &c., specified under Class 3, in Appendix A, as a offset to that advantage, appears to the undersigned to be entirely inadequate.

They are also of opinion, that the periods of training, on which the charge for difference of numbers of men is based, are longer than are necessary with reference to the requirements of India; and that as the East India Company formerly found it safe and expedient to send soldiers to India after very short periods of training, the adoption of a somewhat similar course would tend greatly to reduce the charge on the account, an object that would be further facilitated by a reduction in the number and strength of the Regiments here.

## IN SUMMARY

**REMARKS:**

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**Abstract**

*Third Report of the Committee appointed by the Secretary of State for War and for India, in a letter from Sir E. Lugard to the Under-Secretary of State for India dated the 4th January 1870, and the reply thereto of the 5th January, the Committee have re-assembled for the further consideration of the subject of the payment, by the Government of India, of the home charges for Her Majesty's troops serving in India.*

India Office, February 23, 1870.

In compliance with the desire expressed by the Secretary of State for War and for India, in a letter from Sir E. Lugard to the Under-Secretary of State for India dated the 4th January 1870, and the reply thereto of the 5th January, the Committee have re-assembled for the further consideration of the subject of the payment, by the Government of India, of the home charges for Her Majesty's troops serving in India.

Since the day of the Committee's second report, important changes have been proposed in the constitution of the army in India, and propositions have also been made for recruiting the army on a new principle, which involves the breaking up of the cavalry depot and infantry depot battalions, attaching, in lieu of the former, a home troop of each regiment on service to a regiment of similar equipment at home; and, of the latter, two companies of each battalion abroad to a battalion at home, eight companies to be on foreign service and 12 companies on home service.

A battalion of infantry in India would then consist of eight companies, each company having one captain and two subalterns; and there would be in respect of every battalion two companies at home, each with one captain and one subaltern, these two companies forming the depot, and being attached to a home battalion of 10 companies.

The recruits annually required for each regiment of cavalry in India are estimated at 32, and for each battalion of infantry at 64. Under the proposed arrangement there would be nine regiments of cavalry and 50 battalions of infantry in India, the annual drafts required would be 288 cavalry and 3,000 infantry recruits.

The Committee have not before them, at present, any definite information as to the artillery.

The propositions placed before the Committee are, that ten months is to be regarded as the average period of training of each cavalry, and seven months of each infantry recruit; and that payment should be made from Indian revenues for recruits at rates per man to be calculated with reference to those periods.

It is proposed by the members appointed by the Secretary of State for War that a proportion of the staff charges of each regiment or battalion should be included in the calculation; but this is objected to by the members appointed by the Secretary of State for India, on the ground that the staff charges in question would not be increased in consequence of one troop or two companies being attached to each regiment or battalion, and that the object to be kept in view is the repayment to Imperial revenues of expenditure incurred for the purposes of the Indian Government, and not the relief of the Imperial Exchequer from charges which it would incur independently of any Indian requirements.

The Committee have, therefore, submitted two statements, one exclusive, the other inclusive, of the regimental or battalion staff.

The Committee are of opinion that if to the expense of each recruit, a sum equal to one-third thereof be added, adequate provision would be made for the charge consequent on deaths, desertions, or inability of recruits to proceed to India. The charge for each cavalry recruit would thus be 136l. 13s. 11d., and for each infantry recruit 63l. 8s. 5d., or 144l. 9s. 5d., and 66l. 18s. if the regimental staff charges are to be paid by India.

In regard to invalids or time-expired men awaiting their discharge, it appears to the Committee that the expenditure incurred on that account should not be included in the rate per recruit.

They understand that all invalids will, in future, be sent to the invalid hospital at Netley, or to a consolidated depot near the port of disembarkation, and they consider that the maximum period of remaining there should be six months; that at the expiration of that time, at the latest, the soldiers should either be discharged or brought on the strength of their regiments at home, the time-expired men and those incapable for further service being discharged as soon as possible after arrival in this country.

A statement of the charge on this account should be annually furnished by the War Office, and, after examination by the officers of the Secretary of State for India in Council, should be paid independently of the charge for recruits.

The charge for difference of men on passage should remain as specified in the second report of this Committee, in addition of 10l. 0s. 6d. per man being made on account of forage to the charges for each cavalry soldier, which was inadvertently omitted in the calculation submitted to the second report.

In addition to the above charges, India would have to pay directly the colonial charges and thorough pay.

In the report, the Committee have shown what would be the estimated cost of recruiting and maintaining infantry regiments in India under certain conditions, and have shown that they have

not entered upon the question how far those conditions are consistent with a due regard to economy. But they desire to express their concurrence in the view taken by the Committee provided over by Major-General Jameson, in their report, dated 5th August 1869, that, for the purpose of raising and training the number of recruits required for battalions of infantry in India, it is not necessary to maintain more than one company with the depot in this country.

In a subsequent report, the Committee, when supplied with information as to the artillery, will be prepared to recapitulate their recommendations as to the mode of adjustment of the several claims.

T. L. SECCOMBE. G. I. JAMESON.  
H. W. S. WHISTON. J. MILTON.

#### SEPARATE MINUTE.

We have agreed to the foregoing report, as showing the cost of cavalry and infantry recruits under certain prescribed conditions, which include the following charges:—

*For Cavalry Recruits.*—The pay of two officers, seven non-commissioned officers, and 10 rank and file, for each cavalry regiment; as well as the levy money, free kit, pay, and all allowances of 43 men for 10 months, in order to provide 82 recruits for India.

*For Infantry Recruits.*—The pay of four officers, 12 non-commissioned officers, and six rank and file for two companies of infantry, as well as the levy money, free kit, pay, and all allowances for 80 men for seven months, in order to provide 60 recruits.

We consider that the mere enumeration of the strength in officers and men, with reference to the number of recruits to be provided, is sufficient to show that any scale of charge based thereon must be excessive; whereas among the advantages specified in the confidential "plan for carrying out certain reductions of expenditure upon the army in India, and organising a system for training recruits for battalions serving abroad," it is expressly stated that the plan "affords a more economical mode than that now existing of training and supplying drafts."

How far the charge involved in the propositions before the Committee may be justified by other considerations than the best and cheapest mode of training recruits, it is not our province to consider. But we feel it to be our duty again to refer to the fact, stated in the first report of the Committee, that the East India Company were able to send efficient artillery and infantry recruits to India at a cost of 26l. 7s. 5d. per man, instead of 136l. 13s. 11d. for cavalry, and 63l. 8s. 5d. for infantry recruits as now proposed.

We are fully aware that the changes made in the terms of enlistment, pay, clothing, &c., would have increased the charge as incurred by the East India Company, but the proposed establishments for and the periods of training, which have formed the basis of this third report of the Committee, appear to us to be enormously in excess of what can be possibly required for the purpose of properly recruiting the British Army in India.

T. L. SECCOMBE.  
G. I. JAMESON.

#### PUBLIC WORKS—RAILWAYS.

##### GUARANTEED RAILWAY BUDGET FOR 1871-72.

*Note by Lieut-Col. J. J. McLeod Innes, V.C., B.E., Accountant General, Public Works Department, on the Budget Estimate of the Railway Department for 1870-71, dated 4th March 1871.*

I submit herewith the budget estimates of the Railway Department for 1871-72, compared with the regular and budget estimates of 1870-71, and based on the orders of the Government of India on the several provincial budget estimates. The following points may be noted:—

*Receipts.*—The total estimated receipts for 1871-72 amount to £2,039,180, against a regular estimate of £2,774,448, and a budget estimate of £3,125,258 for 1870-71, as follows:—

	Budget Estimate, 1871-72.	Regular Estimate, 1870-71.	Budget Estimate, 1870-71.
Net traffic earnings.....	2,761,000	2,580,796	2,580,570
Gain by exchange.....	340,998	332,456	330,388
State Railways.....	7,500	7,500	7,500
Mining, Irrigation, and Canal Co's receipts.....	...	...	7,000
<b>Total</b> .....	<b>3,099,500</b>	<b>2,920,752</b>	<b>2,925,468</b>
<b>Expenditure</b> .....	<b>2,039,180</b>	<b>2,774,448</b>	<b>3,125,258</b>
<b>Balance</b> .....	<b>1,060,320</b>	<b>1,146,304</b>	<b>800,210</b>

The difference of £300,785 between the budget and regular estimate for 1870-71 under the head net traffic earnings is due to a general falling off in the traffic earnings of the railways in Madras and Bengal, and to a charge having been made against the revenue account of the Oudh and Rohilkund Railway for renewing permanent way between Lucknow and Cawnpoor. This decrease occurs chiefly in the following railways:—

	Net Pro- fits of 1869-70.	Budget Estimate, 1870-71.	Regular Estimate, 1870-71.	Decrease.
	Rs.	Rs.	Rs.	Rs.
Madras Railway...	29,08,478	39,00,000	22,75,000	16,25,000
G. S. I. "	2,71,839	4,25,000	2,50,000	1,75,000
E. I. "	1,55,69,685	1,55,00,000	1,44,00,000	12,00,000
E. B. "	7,99,122	12,00,000	10,00,000	2,00,000

The decrease of £33,130 in the item gain by exchange is a necessary consequence of the decrease in traffic earnings, and needs no comment.

For 1871-72, the net traffic earnings are estimated to amount to £2,761,650 or £250,890 in excess of the regular estimate for 1870-71. The increase is based on the supposition that the traffic earnings on the Madras Railways will recover themselves to the extent of about Rs. 6½ lakhs, and that there will be an increase of Rs. 6 lakhs in the receipts of the Bombay Railways. A small increase of Rs. 2,40,000 and Rs. 3,50,000 is also anticipated from the Jubbulpore Line and the Eastern Bengal Railway, while, owing to the probable opening of the Allyghur and Byramghat branches, and of the line from Lucknow to Fyzabad, the net earnings of the Oudh and Rohilkund Railway are set down at Rs. 3,07,000 against a probable deficit as already referred to, of Rs. 2,76,000 in 1870-71. The increase in this line is thus Rs. 5,82,000.

*Charges.*—Including the estimated payments of guaranteed interest in England, the following is an abstract of the estimated ordinary outlay on railways during 1871-72, as compared with the regular and budget estimates of 1870-71:—

	Budget Estimate, 1871-72.	Regular Estimate, 1870-71.	Budget Estimate, 1870-71.
	£	£	£
Land and supervision .....	138,770	107,360	145,360
Loss by exchange .....	89, 90	106,740	205,950
State Railways .....	7,500	11,200	12,500
Guaranteed interest on Railway Capital paid in India .....	38,660	37,400	42,358
Guaranteed interest on Railway Capital paid in England .....	4,600,000	4,370,000	4,368,000
Total .....	4,874,060	4,632,700	4,769,063
Deduct .....	4,632,700	.....	4,632,700
Increase .....	241,360	.....	.....
Decrease .....	.....	.....	136,363

The decrease of £38,000 under the head of land and supervision during 1870-71, as compared with the budget estimate of that year, chiefly due to no expenditure having been incurred during the current year in the reclamation and purchase of property in connection with the approach to the Gun-carriage Factory at Bombay. The greater portion of the expenditure on this account has been postponed until 1871-72, and this accounts for £30,000 of the total increase in the estimates of that. The balance of the increase is made up as follows:—

Increase in the charge for establishment and control chiefly due to the salary of the Consulting Engineer for Oudh, and for the Assistant Accounts in Madras as also to the introduction of the consolidated rates of salary	29,150
Less decrease in other items of estimate for purchase of land—	8,740
Net increase	1,410

Under loss by exchange there is a decrease of charge of £99,110 in 1870-71 as compared with the budget estimate of that year. This is chiefly due to two causes: first, to the gross advances during 1870-71 on the railway in which the transaction between India and England are regulated at the exchange of 1s. 10d per rupee, being likely to fall short of the budget estimate by Rs. 37,82,000; and second, to the refunds being in excess of the estimate by Rs. 60,53,600, chiefly owing to the capital account of the Indus Flotilla having to be credited, under the orders of the Secretary of State, with the balances at the credit of the several deposit and insurance funds of the undertaking, and to the capital receipts, consisting chiefly of capital subscribed in India, and of value of stores used on revenue purposes, being in excess of the budget estimate. There is always some difficulty in estimating accurately for these refunds, as also for the gross advances likely to be made in India on capital account, but measures have been taken in this department to ensure more precise estimates for the future.

The cause of the increase in the charges for guaranteed interest to be paid in England is explained by the Secretary of State to be due to anticipated additional receipts on account of capital, which during 1870-71 are estimated to amount to £3,632,000, and during 1871-72 to £4,672,000. Details are wanting to show the distribution of the estimated charge for interest, so that the financial results of each railway in respect to charge on Government for guaranteed interest cannot be exactly told. It seems desirable that the Secretary of State should be asked to furnish in future the necessary details with the budget and regular estimates of the year:—

On the whole, the regular estimate of receipts for 1870-71 is less than the budget estimate by	£380,810
And the regular estimate of expenditure for 1870-71 less than the budget estimate by	£136,363
Leaving a difference for the worse of	£244,447
The budget estimate of receipts for 1871-72 is in excess of the regular estimate by	264,712
And the budget estimate of expenditure is in excess of the regular estimate by	241,360
Leaving a difference for the better of	25,352

#### Net advances in India on account of Guaranteed Capital.

The estimate under this head calls for no special remark, but it may be mentioned that in the estimates furnished by the Secretary of State, details are wanting of the following sums entered therein as probably withdrawals in England by the several railway companies:—

1871-72	£ 1,265,000
1870-71	£ 1,365,000

It would be satisfactory to have these details supplied, as they may be useful to the officials in this country, and can be supplied without much trouble.

It may be added that the whole of the advances for the Madras and Irrigation Canal Company are expected to be made in England, and that no net revenue is anticipated from the project during 1870-71 or 1871-72.

#### MADRAS RAILWAY BUDGET.

By the Government of India, P. W. Department, with reference to two letters, from the Government, Madras, of 15th November and 17th January last, observe that in State expenditure the estimate for State expenditure on establishment, amounting to Rs. 80,487, provision is made for the full salary of the Consulting Engineer, but as the permanent incumbent of the appointment is at present on leave, and is not expected to re-join before the end of the ensuing official year, it will suffice to provide for the allowances of the officer officiating in the post; the estimate is accordingly reduced by Rs. 7,560, and after the addition of Rs. 850 for official postage, which does not appear to have been provided for, passed for an even sum of Rs. 73,700, subject to such further orders as may be issued on the question of the salary to be drawn by the Examiner of Railway Accounts now under the consideration of the Government of India. The provision of Rs. 60,000 for land for the Carnatic Railway seems excessive, and is reduced to Rs. 40,000. The total estimate for purchase of land during 1871-72 will thus stand at Rs. 1,71,600; of this sum, Rs. 49,895 is for the land required for the Neilgherry branch of the Madras Railway. The amount appears high, but it is passed on the understanding that the entry is based on sanctioned estimates. It may be added that details should have been given in the estimate of the items making up the demand of Rs. 10,000 for land in the Bellary district.

The regular estimate of State expenditure during 1870-71 may be accepted for Rs. 2,40,000, but with reference to the excess charge of Rs. 35,300 in the estimate for purchase of land, it should be explained to what causes this is due, there being no authority for incurring expenditure above the grant assigned for the purpose.

*Advances on Capital Account.*—The probable advances on construction account during 1870-71 are entered at Rs. 31,01,055, but with reference to the actual advances up to end of December 1870, as compared with the actuals of 1869-70, the Governor General in Council considers that the regular estimate may be modified as shown in the following table:—

	Madras Railway.	Great Southern of India Railway.	Carnatic Railway.	Total
	To	To	To	To
	Rs.	Rs.	Rs.	Rs.
Gross advances .....	22,15,000	4,25,000	65,000	26,05,000
Refunds .....	12,15,000	5,00,000	20,000	17,35,000
Net advances .....	10,00,000	2,25,000	45,000	12,70,000
Budget estimate .....	20,00,000	50,000	.....	20,50,000



It is observed that the regular estimate for the Great Southern of India Railway is in excess of the budget grant by Rs. 1,75,000. The additional grant was applied for in letter No. 134 dated 17th January 1871, and is hereby sanctioned, but the application should have been made as soon as the necessity for it became apparent, as sanction to an estimate does not include sanction to an additional grant of money.

**Budget Estimate, 1870-71.**—For the Madras Railway, the estimate of gross advances, amounting to Rs. 27,04,000, is reduced as follows :—

Minor Works Reserve	—	—	—	—	Rs. 1,40,561
					1,19,000
					2,59,561
Provision, for minor works and reserve on lines open for two years being excessive, is reduced to Rs. 30,000 each. This will cause a reduction of	—	—	—	—	1,40,561
Provision of Rs. 4,000 for stores being high, is passed for the 4 lakhs only, making a reduction of	—	—	—	—	1,90,000
Total	—	—	—	—	2,49,561

The estimate as thus reduced amounts to Rs. 23,54,439. Of this amount, the sum of Rs. 3,22,000 is for establishment. This is admitted provisionally, pending submission of a statement showing the details on which the estimate is based, as looking to the reduced cash outlay, it would appear to be possible to diminish the charges for establishment considerably. The estimate of refunds, amounting to Rs. 13,20,000 for the Madras Railway, is accepted at Rs. 13,20,439; the estimate of net advances may thus be stated at Rs. 23,54,439—Rs. 13,20,439—Rs. 10,34,000. The estimate of Rs. 14,00,300, for advances and refunds for the Great Southern of India Railway, may stand, as the expenditure for the Southern extension may easily reach 10 lakhs if works be vigorously pushed on during 1871-72. But a statement should be furnished showing the details making up the provision of Rs. 4,20,000 for establishment, which appears excessive for a cash expenditure of only Rs. 15½ lakhs, including four lakhs for stores.

For the Carnatic Railway the estimate is as follows :—

Gross advances	—	—	—	—	Rs. 9,03,000
Refunds	—	—	—	—	2,59,000
Net advances	—	—	—	—	6,44,000

which may be accepted. But it may be observed with reference to the provision of Rs. 53,000 for widening the existing line to Conjevaram from the 3 feet 6 inches to the 5 feet 6 inches gauge that the time for doing this work, if the broad gauge be finally adopted, is a matter for special consideration.

**Madras Railway.**—The regular estimate for 1871-72, as follows, with reference to the actual earnings of the period for which returns have been received :—

	Budget Estimate, 1870-71	Regular Estimate.	
		As submitted.	As altered.
	Rs.	Rs.	Rs.
Gross earnings .....	68,00,000	53,50,000	52,00,000
Working expenses .....	29,00,000	31,43,624	29,25,000
Net revenue .....	39,00,000	22,06,376	22,75,000

As regards the estimate for 1871-72, there is much room for uncertainty. In 1869-70 the gross earnings of the Madras Railway were close upon 60 lakhs. With the increased open mileage the receipts for 1870-71 were estimated to amount to 68 lakhs, which has been reduced in the regular estimate submitted by the Government of Madras to Rs. 53½ lakhs, but it is probable that only 52 lakhs will be received, or 8 lakhs less than in 1869-70. There will be through communication to Bombay almost immediately, and it may happen that the traffic on the North-West line will diminish in consequence thereof rather than increase with the increased open mileage. The Madras estimate of receipts during 1871-72 is for 61 lakhs, but there is really no reliable guide for checking the amount. There is a tendency to improve shown in the traffic returns recently received, so that on the whole, the estimate of 61 lakhs may be accepted, although it is possible that the receipts of next year may be no better than they have been this year.

For working expenses during 1871-72, the estimate amounts to Rs. 32,52,400, and is low compared with the regular estimate for 1870-71. But the expenses of that year have been unduly high, so that the estimate of Rs. 32,52,400 may be accepted, but it may be remarked that the financial results of the working of the current official year suggest doubts whether the administration of the Madras Railway has been as good as usual. It is feared that the train service has not been adapted to the reduced traffic, and that there has been too much rigidity in the management.

The estimate for 1871-72 for the Madras Railway will accordingly stand as follows :—

Gross earnings	—	—	—	Rs. 68,00,000
Working expenses	—	—	—	32,52,400
Net revenue	—	—	—	35,47,600

**Great Southern of India.**—The regular estimate for 1870-71 may be modified as follows :—

	Budget Estimate.	Regular Estimate.	
		As submitted.	As altered.
	Rs.	Rs.	Rs.
Gross earnings .....	8,50,000	8,00,000	7,68,500
Working expenses .....	4,25,000	5,30,974	5,08,500
Net revenue .....	4,25,000	2,69,326	2,50,000

For 1871-72 the gross earnings are estimated to amount to Rs. 8,63,000, but there is no reason to anticipate that the ordinary earnings will be higher than in 1869-70, when they were Rs. 7,71,000. During 1870-71 the receipts are estimated to yield Rs. 7,58,500, but during 1871-72 there will be some profit from carrying stores for capital on account of the extension. On the whole, the year's earnings should not be taken at more than Rs. 8,25,000, of which Rs. 5,00,000 (60 per cent.) may be reserved for working expenses, leaving the net revenue at Rs. 3,25,000.

**Carnatic Railway.**—The regular estimate for 1870-71 should be reduced from Rs. 11,473 to Rs. 7,500, while the budget estimate for 1871-72 may be accepted as submitted, viz :—

Gross earnings	—	—	—	Rs. 42,000
Working expenses	—	—	—	30,000
Net revenue	—	—	—	12,000

If, however, the line is converted during the year to the broader gauge, the result may be less favourable than the estimate.

## COAL TRAFFIC IN INDIA.

To the Editor of the "Englishman."

SIR,—At the meeting of the shareholders of the East Indian Railway Company, held in London in January last, Mr. R. W. Crawford, M. P., the Chairman, remarked that the Company had every reason to expect the Chord Line would pay for its construction, as it would enable them to supply coal cheaply to railways to the north and westward of the new coal-fields of Kurhumballi, at a good profit to the Company as carriers, and that this new traffic could not have been obtained had they only to depend upon the old circuitous route. He further remarked the effect of cheap fuel would be to reduce the cost of transport, and would enable them to supply the Oude and Rohilkand Railway Company and other railways at what must be considered a moderate cost. On the north the Punjab Railway Company would develop traffic to and from Gazeabad on the East Indian Railway to Mooltan. Here again considerable advantages would arise from sending coal from the Chord Line to the Punjab, delivering on favourable terms.

It is to be regretted that the above views, advocated for a cheap rate for transit of coal, have not been carried out by the Board of Agency here, or at any rate that the attention it deserves has not been given by them to this important subject.

Formerly, by the Loop Line, the rates for carriage of coal for distances over 900 miles was at the rate of 1-5th of a pie per maund per mile; for over 300 miles ¼th of a pie per maund per mile; and ¼rd of a pie for distances under 300 miles.

On the opening of the Chord Line, however, in January last, instead of the cost of carriage being reduced as was expected, the East Indian Railway Company introduced a tariff of a percentage abatement for distance, by which not only was no reduction made by the distance to the North-West being shortened, but the rates were actually increased. The Delhi Railway Company, for instance, formerly got coal conveyed to Gazeabad via the Loop Line, a distance of 977 miles, for Rs. 1-0-3 per maund; but for the past three months they have had to pay from Bansegunge to Gazeabad by the Chord Line, a distance of 821 miles, Rs. 1-2-3 per maund, that is to say, notwithstanding by the opening of the Chord Line the East Indian Railway Company saved engine power and wear and tear of rolling-stock for a distance of 156 miles, they actually increased the freight on coal from Bansegunge to Gazeabad by 2 annas per maund.

From the 1st of April the East Indian Railway Company have advertised a reduction of 30 per cent. abatement for distances



The difference of £308,780 between the budget and regular estimate for 1870-71 under the head net traffic earnings is due to a general falling off in the traffic earnings of the railways in Madras and Bengal, and to a charge having been made against the revenue account of the Oudh and Rohilkund Railway for renewing permanent-way between Lucknow and Cawnpore. This decrease occurs chiefly in the following railways:—

	Net Profit of 1869-70.	Budget Estimate, 1870-71.	Regular Estimate, 1870-71.	Decrease.
	Rs.	Rs.	Rs.	Rs.
Madras Railway...	38,08,478	39,00,000	22,75,000	16,25,000
G. S. I. "	2,71,320	4,25,000	2,50,000	1,75,000
E. I. "	1,58,69,685	1,58,00,000	1,45,00,000	12,00,000
E. B. "	7,89,123	12,00,000	10,00,000	2,00,000

The decrease of £33,130 in the item gain by exchange is a necessary consequence of the decrease in traffic earnings, and needs no comment.

For 1871-72, the net traffic earnings are estimated to amount to £2,781,680 or £250,880 in excess of the regular estimate for 1870-71. The increase is based on the supposition that the traffic earnings on the Madras Railways will recover themselves to the extent of about Rs. 6½ lakhs, and that there will be an increase of Rs. 6 lakhs in the receipts of the Bombay Railways. A small increase of Rs. 2,40,000 and Rs. 3,50,000 is also anticipated from the Jubulpore Line and the Eastern Bengal Railway, while, owing to the probable opening of the Allyghur and Byramghat branches, and of the line from Lucknow to Fyzabad, the net earnings of the Oudh and Rohilkund Railway are set down at Rs. 3,07,000 against a probable deficit as already referred to, of Rs. 2,75,000 in 1870-71. The increase in this line is thus Rs. 6,82,000.

*Charges.*—Including the estimated payments of guaranteed interest in England, the following is an abstract of the estimated ordinary outlay on railways during 1871-72, as compared with the regular and budget estimates of 1870-71:—

	Budget Estimate, 1871-72.	Regular Estimate, 1870-71.	Budget Estimate, 1870-71.
	£	£	£
Land and supervision.....	138,770	107,360	145,360
Loss by exchange.....	89, 90	108,740	205,850
State Railways.....	7,500	11,200	12,500
Guaranteed interest on Railway Capital paid in India.....	38,660	37,400	42,353
Guaranteed interest on Railway Capital paid in England.....	4,600,000	4,370,000	4,368,000
Total.....	4,874,060	4,632,700	4,769,063
Deduct.....	4,632,700	.....	4,632,700
Increase.....	241,360	.....	.....
Decrease.....	.....	.....	136,363

The decrease of £38,000 under the head of land and supervision during 1870-71, as compared with the budget estimate of that year, chiefly due to no expenditure having been incurred during the current year in the reclamation and purchase of property in connection with the approach to the Gun-carriage Factory at Bombay. The greater portion of the expenditure on this account has been postponed until 1871-72, and this accounts for £30,000 of the total increase in the estimates of that. The balance of the increase is made up as follows:—

Increase in the charges for establishment and control chiefly due to the appointment of an additional Member of Council for Madras, and of an Assistant Commissioner of Railways Accounts in Madras, as also to the introduction of the consolidated rates of salary —	25,150
Less decrease in other items of estimate for purchase of land —	9,740
Net increase —	1,410

Under loss by exchange there is a decrease of charge of £99,110 in 1870-71 as compared with the budget estimate of that year. This is chiefly due to two causes: first, to the gross advances during 1870-71 on the railway in which the transaction between India and England are regulated at the exchange of 1s. 10d per rupee, being likely to fall short of the budget estimate by Rs. 57,82,000; and second, to the refunds being in excess of the estimate by Rs. 60,53,600, chiefly owing to the capital account of the Indus Flotilla having to be credited, under the orders of the Secretary of State, with the balances at the credit of the several deposit and insurance funds of the undertaking, and to the capital receipts, consisting chiefly of capital subscribed in India, and of value of stores used on revenue purposes, being in excess of the budget estimate. There is always some difficulty in estimating accurately for these refunds, as also for the gross advances likely to be made in India on capital account, but measures have been taken in this department to secure more precise estimates for the future.

The cause of the increase in the charges for guaranteed interest to be paid in England is explained by the Secretary of State to be due to anticipated additional receipts on account of capital, which during 1870-71 are estimated to amount to £8,822,000, and during 1871-72 to £4,672,000. Details are wanting to show the distribution of the estimated charge for interest, so that the financial results of each railway in respect to charges on Government for guaranteed interest cannot be exactly told. It seems desirable that the Secretary of State should be asked to furnish in future the necessary details with the budget and regular estimates of the year:—

On the whole, the regular estimate of receipts for 1870-71 is less than the budget estimate by —	£350,810
And the regular estimate of expenditure for 1870-71 less than the budget estimate by —	£134,366

Leaving a difference for the worse of —	£14,447
The budget estimate of receipts for 1871-72 is in excess of the regular estimate by —	£64,713
And the budget estimate of expenditure is in excess of the regular estimate by —	£27,380

Leaving a difference for the better of —

£3,323

#### Net advances in India on account of Guaranteed Capital.

The estimate under this head calls for no special remark, but it may be mentioned that in the estimates furnished by the Secretary of State, details are wanting of the following sums entered therein as probably withdrawals in England by the several railway companies:—

1871-72	£ 1,935,000
1870-71	£ 6,385,000

It would be satisfactory to have these details supplied, as they may be useful to the officials in this country, and can be supplied without much trouble.

It may be added that the whole of the advances for the Madras and Irrigation Canal Company are expected to be made in England, and that no net revenue is anticipated from the project during 1870-71 or 1871-72.

#### MADRAS RAILWAY BUDGET.

By the Government of India, P. W. Department, with reference to two letters, from the Government, Madras, of 15th November and 17th January last, observe that in State expenditure the estimate for State expenditure on establishment, amounting to Rs. 8,467, provision is made for the full salary of the Consulting Engineer, but as the permanent incumbent of the appointment is at present on leave, and is not expected to re-join before the end of the ensuing official year, it will suffice to provide for the allowances of the officer officiating in the post: the estimate is accordingly reduced by Rs. 7,560, and after the addition of Rs. 850 for official postage, which does not appear to have been provided for, passed for an even sum of Rs. 73,700, subject to such further orders as may be issued on the question of the salary to be drawn by the Examiner of Railway Accounts now under the consideration of the Government of India. The provision of Rs. 60,000 for land for the Carnatic Railway seems excessive, and is reduced to Rs. 40,000. The total estimate for purchase of land during 1871-72 will thus stand at Rs. 1,71,800; of this sum, Rs. 49,895 is for the land required for the Neigherry branch of the Madras Railway. The amount appears high, but it is passed on the understanding that the entry is based on sanctioned estimates. It may be added that details should have been given in the estimate of the items making up the demand of Rs. 10,000 for land in the Bellary district.

The regular estimate of State expenditure during 1870-71 may be accepted for Rs. 2,40,000, but with reference to the excess charge of Rs. 35,300 in the estimate for purchase of land, it should be explained to what causes this is due, there being no authority for incurring expenditure above the grant assigned for the purpose.

*Advances on Capital Account.*—The probable advances on construction account during 1870-71 are entered at Rs. 31,01,055, but with reference to the actual advances up to end of December 1870, as compared with the actuals of 1869-70, the Governor General in Council considers that the regular estimate may be modified as shown in the following table:—

	Madras Railway.	Great Southern of India Railway.	Carnatic Railway.	Total
	To	To	To	To
	Rs.	Rs.	Rs.	Rs.
Gross advances.....	38,12,000	4,25,000	35,000	42,72,000
Refunds.....	12,18,000	2,00,000	30,000	14,48,000
Net advances.....	25,94,000	2,25,000	5,000	28,24,000
Budget estimate.....	28,01,000	2,25,000	5,000	30,31,000

It is observed that the regular estimate for the Great Southern of India Railway is in excess of the budget grant by Rs. 1,75,000. The additional grant was applied for in letter No. 124 dated 17th January 1871, and is hereby sanctioned, but the application should have been made as soon as the necessity for it became apparent, as sanction to an estimate does not include sanction to an additional grant of money.

**Budget Estimate, 1870-71.**—For the Madras Railway, the estimate of gross advances, amounting to Rs. 27,04,000, is reduced as follows :—

Minor Works Reserve	Rs. 1,40,000
	1,19,000
	2,59,000
Provision, for minor works and reserve on lines open for two years being excessive is reduced to Rs. 50,000 each. This will cause a reduction of	1,09,000
Provision of Rs. 5,91,00 for stores being high, is passed for Rs. 4 lakhs only, making a reduction of	1,90,000
Total	5,49,000

The estimate as thus reduced amounts to Rs. 23,54,439. Of this amount, the sum of Rs. 3,22,000 is for establishment. This is a little provisionally, pending submission of a statement showing the details on which the estimate is based, as looking to the reduced cash outlay, it would appear to be possible to diminish the charges for establishment considerably. The estimate of refunds, amounting to Rs. 13,20,000 for the Madras Railway, is accepted at Rs. 13,20,439; the estimate of net advances may thus be stated at Rs. 23,54,439—Rs. 13,20,439—Rs. 10,34,000. The estimate of Rs. 18,50,300, for advances and refunds for the Great Southern of India Railway, may stand, as the expenditure of the Southern extension may easily reach 10 lakhs if works be vigorously pushed on during 1871-72. But a statement should be furnished showing the details making up the provision of Rs. 4,20,000 for establishment, which appears excessive for a cash expenditure of only Rs. 15½ lakhs, including four lakhs for stores.

For the Carnatic Railway the estimate is as follows :—

Gross advances	Rs. 2,08,000
Refunds	2,59,000
Net advances	6,44,000

which may be accepted. But it may be observed with reference to the provision of Rs. 53,000 for widening the existing line to Conjeeveram from the 3 feet 6 inches to the 5 feet 6 inches gauge that the time for doing this work, if the broad gauge be finally adopted, is a matter for special consideration.

**Traffic Earnings, Madras Railway.**—The regular estimate for 1870-71 is modified as follows, with reference to the actual earnings of the period for which returns have been received :—

	Budget Estimate, 1870-71	Regular Estimate.	
		As submitted.	As altered.
	Rs.	Rs.	Rs.
Gross earnings	68,00,000	53,50,000	52,00,000
Working expenses	29,00,000	31,43,624	29,25,000
Net revenue	39,00,000	22,06,376	22,75,000

As regards the estimate for 1871-72, there is much room for uncertainty. In 1869-70 the gross earnings of the Madras Railway were close upon 60 lakhs. With the increased open mileage the receipts for 1870-71 were estimated to amount to 66 lakhs, which has been reduced in the regular estimate submitted by the Government of Madras to Rs. 53½ lakhs, but it is probable that only 52 lakhs will be received, or 8 lakhs less than in 1869-70. There will be through communication to Bombay almost immediately, and it may happen that the traffic on the North-West line will diminish in consequence thereof rather than increase with the increased open mileage. The Madras estimate of receipts during 1871-72 is for 61 lakhs, but there is really no reliable guide for checking the amount. There is a tendency to improve shown in the traffic returns recently received, so that on the whole, the estimate of 61 lakhs may be accepted, although it is possible that the receipts of next year may be no better than they have been this year.

For working expenses, during 1871-72, the estimate amounts to Rs. 32,52,400, and is low compared with the regular estimate for 1870-71. But the expenses of that year have been unduly high, so that the estimate of Rs. 32,52,400 may be accepted, but it may be remarked, that the financial results of the working of the current official year suggest doubts whether the administration of the Madras Railway has been as good as usual. It is feared that the train service has not been adapted to the reduced traffic, and that there has been too much rigidity in the management.

The estimate for 1871-72 for the Madras Railway will accordingly stand as follows :—

Gross earnings	Rs. 61,00,000
Working expenses	32,52,400
Net revenue	28,47,600

**Great Southern of India.**—The regular estimate for 1870-71 may be modified as follows :—

	Budget Estimate.	Regular Estimate.	
		As submitted.	As altered.
	Rs.	Rs.	Rs.
Gross earnings	8,50,000	8,00,000	7,58,500
Working expenses	4,25,000	5,30,974	5,08,500
Net revenue	4,25,000	2,69,026	2,50,000

For 1871-72 the gross earnings are estimated to amount to Rs. 8,63,000, but there is no reason to anticipate that the ordinary earnings will be higher than in 1869-70, when they were Rs. 7,71,000. During 1870-71 the receipts are estimated to yield Rs. 7,58,500, but during 1871-72 there will be some profit from carrying stores for capital on account of the extension. On the whole, the year's earnings should not be taken at more than Rs. 8,25,000, of which Rs. 5,00,000 (60 per cent.) may be reserved for working expenses, leaving the net revenue at Rs. 3,25,000.

**Carnatic Railway.**—The regular estimate for 1870-71 should be reduced from Rs. 11,473 to Rs. 7,500, while the budget estimate for 1871-72 may be accepted as submitted, viz :—

Gross earnings	Rs. 42,000
Working expenses	30,000
Net revenue	12,000

If, however, the line is converted during the year to the broader gauge, the result may be less favourable than the estimate.

## COAL TRAFFIC IN INDIA.

To the Editor of the "Englishman."

SIR,—At the meeting of the shareholders of the East Indian Railway Company, held in London in January last, Mr. R. W. Crawford, M. P., the Chairman, remarked that the Company had every reason to expect the Chord Line would pay for its construction, as it would enable them to supply coal cheaply to railways to the north and westward of the new coal-fields of Kurbhalli, at a good profit to the Company as carriers, and that this new traffic could not have been obtained had they only to depend upon the old circuitous route. He further remarked the effect of cheap fuel would be to reduce the cost of transport, and would enable them to supply the Oude and Rohilkund Railway Company and other railways at what must be considered a moderate cost. On the north the Punjab Railway Company would develop traffic to and from Gazeabad on the East Indian Railway to Mooltan. Here again considerable advantages would arise from sending coal from the Chord Line to the Punjab, delivering on favourable terms.

It is to be regretted that the above views, advocated for a cheap rate for transit of coal, have not been carried out by the Board of Agency here, or at any rate that the attention it deserves has not been given by them to this important subject.

Formerly, by the Loop Line, the rates for carriage of coal for distances over 900 miles was at the rate of 1-5th of a pie per maund per mile; for over 300 miles 3/4th of a pie per maund per mile; and 3rd of a pie for distances under 300 miles.

On the opening of the Chord Line, however, in January last, instead of the cost of carriage being reduced as was expected, the East Indian Railway Company introduced a tariff of a percentage abatement for distance, by which not only was no reduction made by the distance to the North-West being shortened, but the rates were actually increased. The Delhi Railway Company, for instance, formerly got coal conveyed to Gazeabad via the Loop Line, a distance of 977 miles, for Rs. 1-0-3 per maund; but for the past three months they have had to pay from Baneegeunge to Gazeabad by the Chord Line, a distance of 821 miles, Rs. 1-2-8 per maund, that is to say, notwithstanding by the opening of the Chord Line the East Indian Railway Company saved engine power and wear and tear of rolling-stock for a distance of 156 miles, they actually increased the freight on coal from Baneegeunge to Gazeabad by 2 annas per maund.

From the 1st of April the East Indian Railway Company have advertised a reduction of 30 per cent. abatement for distances

over 925 miles. Thus the freight from Ranagunge to Gaseabad is Rs. 1-0-0, or only three paise more than the old mode of conveyance by the Loop line, although the distance of 156 miles is saved. Surely, if the East Indian Railway Company could afford to carry coal, as they formerly did, at 1-5th of a pie per maund, per mile, (unless they were radically wrong in their calculations), they certainly could afford to do the same now; in fact, owing to their having to convey their own fuel a less distance, they ought to be able to convey coal for long distances at 4th of a pie per maund per mile, and this rate would amply remunerate them. Mr. Crawford, when he mentioned at the meeting of the shareholders in London that they would be enabled by the opening of the Chord line to supply the railways to the north and westward cheaply, could not possibly have been aware that the Board of Agency out here were doing all they possibly could to cripple a trade, the importance of which is acknowledged by every country as the most vital of all, as fostering and assisting all other trades. If the resources of a country are to be developed, it is *prima facie* an acknowledged fact among all political economists that coal and other fuel must be carried at the minimum cost that will remunerate the carriers. The Government of India have more than once impressed upon the Board of Agency the necessity of their limiting the charges for freight of coal to such rates as will give them a fair minimum return on the transport. It is not to be expected, however, that the Board of Agency, as it is at present constituted, is competent to judge of the development of traffic, and it is a serious matter for the consideration of the shareholders of the East Indian Railway Company and the taxpayers of India whether it would not be to their advantage to elect on the Board of Agency one or two members of the mercantile community, who are able to give the best views on trade and commerce. When, for instance, the Board of Agency elects to carry such a perishable article as grain at a cheaper rate than coal, it is not to be wondered at that the public should lose confidence in their management, and it is to be believed that if the matter were brought prominently to the notice of the authorities in London, a radical change would take place in the management, and eventually the welfare of the East Indian Railway Company.

In conclusion, it is to be hoped that proprietors of coal mines will not let this matter rest, but urge upon the Government and East Indian Railway Company the necessity of fuel being carried at the cheapest rate possible to all parts of India.

ONE INTERESTED IN THE DELHI RAILWAY CO.

#### A NEW CEMENT.

(Indian Daily News.)

If the Public Works Department are not too obtuse or too prejudiced to learn, they may derive some useful hints from a pamphlet from Roorkee which we have on our table, on Limes, Mortars, and Cements in this country. In a large majority of cases the failure of our public buildings probably arises from the use of bad mortar; and if the writer of the pamphlet in question is to be depended on, one cause of the defect is a lamentable want of practical knowledge as regards both the selection of materials for lime, and their subsequent manipulation, on the part of the officers of the Public Works Department, into whose technical instruction neither the art of preparing mortar nor the chemistry of its component materials appears to enter. On the Great Indian Peninsula Railway, where the specifications were for mortar made of one part lime and one part sand; there is good reason to believe that neglect to distinguish between one sand and another led to an additional expenditure of a million sterling for reconstruction. Attention to the facts detailed in the pamphlet before us would have obviated this and similar failures.

But perhaps the most important part of this little work is that which details Mr. Sanderson's experiments in the manufacture of artificial hydraulic cement, and in the preparation of similar cements from natural cement stones, an unlimited supply of which exists in the Dehra Dhoon, and in a spur of the Sewalik range, near Hurdwar. The result of the former experiments, which were undertaken in the first instance at the expense of Government, but discontinued without a fair trial, and then taken up again by Mr. Sanderson, has been to show that artificial cement can be manufactured for 12 annas per cubic foot, the average cost of Portland cement being Rs. 2-4 per cubic foot. The results obtained from the preparation of the natural cement stones, however, seem to show that they may be substituted for the artificial cement with still further advantage. A preparation of a pair of bricks, joined crosswise by three-sixteenths of an inch of cement obtained near Hurdwar, has sustained without rupture a pressure of 1,037 lbs., being 50½ lbs. per square inch of the joint. Another similar experiment showed an adhesive power of 59½ lbs., while the resistance to crushing powers has been approximately ascertained to be at least 500 lbs. per square inch. Notwithstanding these remarkable results, no notice seems to have been taken of the numerous letters and reports on the subject submitted to Government. In the first instance,

Mr. Sanderson received the stereotyped answer given to all discoverers who have the audacity to find anything of importance where the Geological Survey have found nothing. The Superintendent Engineer, in forwarding Mr. Sanderson's memorandum, wrote officially that "he thought the probability was against natural cement stone being found, because the experienced Geologist Sir Proby Cautley, who was so intimately acquainted with the Dhoon, would have discovered it, could it have been found." The ultimate satisfaction obtained by the discoverer seems to have been the admission by the same official that he had proved his point as regards the existence of the stones, qualified by a re-assertion of his opinion that "it is very unlikely that Sir Proby Cautley should have missed a good natural cement, procurable to any extent in the Dehra Dhoon;" and the reports of experiments made with the argillaceous limestone discovered in still greater quantity near Hurdwar, do not seem to have been even acknowledged. "Whether it is," says the writer of the pamphlet under notice, "that the officials of the D. P. W., from the highest to the lower grades, are overwhelmed with the enormous quantity of office detail, in docketing, minuting, code-form work, and intricate forms of accounts, or that a general feeling of dislike to innovations prevails in the department; certain it is that there is more difficulty in obtaining recognition of a valuable material newly brought to notice than in England, where settled trades and vested interests have to be contended with."

Close to the town of Hurdwar the beds are said to vary from two to nine feet in thickness. A navigable stream and abundance of fuel are at hand, and the cost of the cement powder fully prepared is about Rs. 22 per 100 cubic feet, that of the Portland cement imported from England being Rs. 200 for the same quantity. Really there seems here to be an excellent opportunity for Lord Mayo to effect an important saving in the department he has taken under his own special care, without incurring any of the odium that sometimes attends measures of economy.

We have received from Roorkee a small pamphlet by Mr. W. Sanderson, O.E., on "Lime, Mortar, and Cement." It is as a technical work indisputably of value, and even to the reader who is not in the D. P. W., and does not know the difference between "hot" mortars and "cold" mortars, Mr. Sanderson's remarks are remarkably suggestive. We were ourselves struck in glancing over it by the extraordinary apathy shown by "the authorities" to improvement. If it be allowed that first-rate cements are desiderata—and that some of the more conspicuous failures of the department, notably that at Allahabad, were owing to the inferior quality of the mortar used—two premises which we should imagine few will refuse to grant—it is evident that efforts to supply better cements at a cheaper rate deserve some encouragement. Why, then, should Mr. Sanderson's efforts have been so laboriously discouraged? That officer discovered near the head of the Ganges Canal at Hurdwar a vast deposit of argillaceous limestone, a most valuable discovery in this country where the sand used in the formation of mortar is in nine places out of ten about as suitable for that purpose as bread crumbs would be, and where imported cements are exorbitantly priced. From Mr. Sanderson's limestone, first-rate Portland cement can be manufactured at Hurdwar, and *used fresh* at a third of the cost at which it is brought from England. That it is indeed first-rate may be learned from the fact that a "pair of bricks joined crossways by 8/16ths of an inch thickness of cement, underwent a trial to the extent of 1,037 lbs. without being ruptured, the area of joint being 20½ square inches, the strain applied 50½ lbs. per square inch;" and yet, when Mr. Sanderson notified his discovery of cement stone, no one would believe him. "Sir Proby Cautley," they said, "would have discovered it, if it could have been found;" nor to many of his more pressing communications on the subject could he obtain satisfactory answers. "Whether it is," says Mr. Sanderson, "that the officials of the Department Public Works are overwhelmed with office work, or that a general feeling of dislike to innovations prevails in the department, certain it is that there is more difficulty in obtaining recognition of a valuable material newly brought to notice, than in England, where settled trades and vested interests have to be contended with. It is not simply that the repeated notices and assertions in reference to the valuable cement stone of Hurdwar fail to draw attention, but the whole subject seems distasteful, and meets only neglect."

#### REVIEW OF THE REVENUE ACCOUNTS OF THE R. E. AND C. I. RAILWAY.

(Gazette of India, March 25.)

Letter from Major E. C. S. Williams, R.E., Deputy Secretary to the Government of India, P. W. Department, dated 17th March 1871, to the Secretary to the Government of Bombay, P. W. Department (Railways).

I AM directed to acknowledge the receipt of your letter dated 14th February 1871, forwarding the review of the revenue

account of the Bombay, Baroda, and Central India Railway for the first half of 1870.

The review has been prepared in the form lately prescribed, and I am directed to express the acknowledgment by the Government of India of the satisfactory way in which Captain Oldham has commenced the system of analysis which is now to be adopted throughout India.

The cost of carrying freight which is deduced by the reviewer is stated to be only approximate for want of certain information, but it represents facts of the gravest importance to the well-doing of this line. The average cost of carrying a ton-mile of goods is shown to have been 7.35 pies. This is almost identical with the charge made to the public for the bulk of the goods traffic in Upper India, which results in a large profit.

One great cause of the high cost of working is the amount of dead weight hauled over the line, and to reduce this every effort should be made. It appears from the figures of the railway that of the total coaching ton-mileage, 37,361,361, only 4,594,077 ton-mile represent paying freight; that is to say, about 94 per cent of dead load were hauled for every ton of paying load. The total goods ton-mileage was 128,615,622, of which 33,080,038 were due to the carriage of paying freight, that is to say, about 24.5 tons of dead load were hauled for every ton of paying load. Taking the whole traffic together, for every ton of paying load, 0.94 ton of engine, tender and brakes, and 2.61 tons vehicles, or in all, 3.55 tons of dead weight were hauled.

The Bombay, Baroda, and Central India Railway has no gradients, and the working expenses are not increased by any such peculiarity in the first construction of the line or by any other exceptional circumstance, and the balance of traffic is more favorable than on many better paying lines. The half-year's account showed a comparatively favorable result, the revenue having largely, and the expenditure only slightly exceeded. There is undoubtedly then great room for improvement in the working management, and some points to which attention should be especially turned are indicated by the review. Thus it is shown that the—

Passenger train mileage was ..... 174,795  
And the 1st class vehicle mileage was..... 332,858

so that there were about two 1st class carriages on an average in each passenger train, while the average number of passengers in each such vehicle was 9.99. This seems to point to the necessity of greater watchfulness over the traffic arrangements, and the 2nd class passenger traffic does not appear to have been worked more economically than the 1st class. The vehicle mileage was 477,659, or nearly 3 vehicles to each train, while out of the 40 seats in every such vehicle, only 4.2 were occupied on an average.

If these matters have not already engaged the attention of the Consulting Engineer, I am directed to point them out, and to request that the Government of Bombay will direct the working arrangements of the line to be very carefully scrutinised with a view to improving the proportion of paying to non-paying weight.

#### THE MADRAS RAILWAY TRAFFIC.

On the 9th December last, the Secretary to the Government of India, P. W. Dept., writing to the Government of Madras, observed that their attention had been attracted to the serious falling off in the traffic of the Madras Railway during the 2nd and 3rd quarters of 1870. The weekly traffic returns show that the receipts during these periods for both south-west and north-west lines were Rs. 13,66,454 and Rs. 11,43,301 as against Rs. 15,26,049 and Rs. 16,04,838 in the corresponding quarters of 1869. The additional mileage open during 1870 makes the decrease still more striking, the Government of Madras were asked to explain the cause of this diminution of traffic.

The Government of Madras, in reply, forwarded a letter from the Acting Consulting Engineer, in which that Officer, after communication with the Agent and Manager of the Company, explains at length the reasons, so far as they can be ascertained, of the diminution under the main heads of passengers, miscellaneous traffic, and goods, the decline of passenger traffic is attributed to the prevalence of cholera in several of the principal towns contiguous to the railway, and to the circumstance that the depression in the cotton market, and in traffic generally, indisposed the public to make such use of the line as the people, it is believed, would be inclined to do in more prosperous times; while the decrease in luggage, which is the only item worthy of notice under the second head, has been the natural result of the following off in passenger traffic. Of the decrease of Rs. 6,03,483, under "Goods," Rs. 4,82,297 are owing to the article of cotton, of which a smaller quantity than in previous years has of late found its way to the coast, owing to the depreciation of its value in Europe. It is thought that considerable quantities are held back by the growers in anticipation of a rise in price, and, till this takes place, it is feared that little improvement in the returns is to be expected. The local Government and that the State of the traffic receives close attention, and every circum-

stance is taken advantage of which is considered likely to conduce to its development. The following is the letter from the Acting Consulting Engineer for Railways, to the Secretary to the Government of Madras, P. W. Dept., Railway, to which reference is made:—

Referring to G. O. of the 10th March No. 3081, I have the honor, after communicating with the Agent of the Madras Railway, to report as follows upon the causes which have led to the falling off in the traffic receipts during the 2nd and 3rd quarters of the year 1870.

2. The gross receipts were for the six months ended 30th September.

1869.	1870.	Decrease.
31,38,813	24,91,339	6,46,374

But to arrive at the particular items of traffic in which there was a falling off, I beg to exhibit the details of receipts from each of the three classes of traffic, namely, "Passenger," "Miscellaneous," and "Goods," for the six months ended 30th September 1869 and 1870 respectively.

	1869.	1870
	Rs.	Rs.
First Class .....	68,427	53,205
Second " .....	72,013	72,408
Third " .....	7,06,524	6,65,437
Cooly " .....	32,920	43,608
Soldiers " .....	28,053	18,086
Special and Troop Trains.....	1,608	10,598
Total...	8,09,445	8,69,377

The Agent finds it difficult to account for the falling off in the first-class. The decrease in the third-class is attributable to the severe visitation of cholera in several of the principal towns in the neighbourhood of the railway, and to the fact that, in consequence of the depression of the cotton market, the ryots have not had occasion to use the railway at all.

	1869.	1870.
	Rs.	Rs.
Passengers' luggage ... ..	29,189	23,644
Parcels " .....	46,656	43,317
Horses, Carriages, and dogs ...	38,186	42,590
Total...	1,13,031	1,09,451

The decrease here is due to passengers' luggage falling off, and is probably consequent on the diminution in passenger traffic.

	1869.	1870.
	Rs.	Rs.
Merchandise " .....	18,74,828	13,88,385
Railway Material.....	2,15,933	1,11,031
Locomotive Wood Fuel .....	10,843	.....
Cattle and Demurrage .....	7,000	5,510
Total...	21,08,609	15,04,926

Of the falling off of Rs. 486,443 in the merchandise traffic cotton alone accounts for Rs. 4,82,297 as the result of the last depressed state of the cotton market. It is probable that the bulk of the last year's crop has been stored in the interior, and will continue to be withheld until there is an improvement in the market.

6. The falling off in "Material" is due in part to the smaller quantity of material carried for construction, and to the operation of the rule which requires all stores and material on Revenue Account to be carried free. This latter remark applies also to Locomotive wood fuel.

7. The Agent informs me that this falling off in the traffic receipts has, for some time past, been a source of much anxiety both to the Traffic Manager and himself. In cases where there was reason to imagine that goods were being carried by other means than the railway, special reductions in the rates have been introduced, with view to attract such traffic on to the line, and every effort has been and will continue to be made to improve the state of affairs. But it is feared that as long as the present extraordinary stagnation in trade exists, little real development of traffic can reasonably be looked for.

#### PUBLIC WORKS—IRRIGATION.

##### CANAL VERSUS WELL-IRRIGATION.

To the Editor of the "Pioneer."

DEAR SIR,—As the question of the extent to which the canals have supplanted well-irrigation appears to be attracting some attention just now; it may not be out of place to tell a story I heard the other day by the banks of the Ganges Canal. It was that when the canal was opened the people were made to execute ~~work~~ to the effect that they would discontinue the use of their irrigation wells. It was also told that a year or two ago a



canal officer, finding a *kohar* fixed at a well, had it pulled up there and then. I daresay no interference would take place where, say, owing to irregularity of the surface, canal water could not be easily brought. The rise in the water-level in such situations, caused by percolation, would probably render the construction of serviceable *butcha* wells, or the maintenance of old ones, a matter of great uncertainty; but it would in masonry wells not reaching the spring, as a rule, increase the supply: the brickwork would keep the loose upper soil from tumbling into the shaft which it would have a constant tendency to do in *butcha* wells, when the sides had got moistened up to near the top. I think, too, that the spring or "bum" water will be found to rise higher now than before in the vicinity of the Ganges Canal, at all events in the upper part of the Doab. It appears to me very probable that a large proportion of the immense volume of water lost in the northern division must find its way below the clay stratum that keeps down the "bum," and by increasing the head cause a stronger spring.

Cultivators have occasionally informed me that the productive powers of their land have fallen off after a few years of canal irrigation. Whether this assertion is true or not, and if true, whether it is traceable to over-cropping or the increased growth of exhausting staples (there being no proportionate increase in the manure supply), or to the deposit of inorganic matter, or to any other cause or causes, is a matter of such grave importance that I would recommend it as one of the very first objects for the consideration of the new Ministry of Agriculture. I am not prepared to hazard any decided opinion, with my present knowledge, but I would back the *butcha* land, sufficiently watered from wells, against the best canal irrigated fields, at all events for a crop of wheat. The great obstacle to improvement in Indian husbandry is the want of manure. The dung of cows and other animals and the sweepings of towns are now largely used as fuel both for domestic purposes and for brick-burning. To cheapen firewood, if a *butcha* system of irrigation is suggested, should be the first object. Government, as the most extensive brick-maker, might direct its officers to give up by degrees the consumption of valuable fertilizers in brick-kilns as other fuel become available.

I daresay that where practicable black kunkur and stone are employed for building, but have artificial substitutes for brick had a fair trial? I would further suggest that school-houses, police-stations, and similar buildings, particularly in out-lying localities, over whose construction it is difficult to maintain a regular supervision, might be constructed of sun-baked bricks (in exposed portions some *pukka* bricks might be used).

I am not aware if guano has ever been tried in this country, but I have been struck by the quantities of bones left to bleach round village sites. Bone-dust is highly prized by English agriculturists; an experiment in its manufacture and application would cost but a trifle. SHEFFIELD.

#### IRRIGATION BY WIND POWER.

THE following letter from Mr. H. A. Harris, of the Bengal Marine, dated 16th February, in continuation of his previous letters on the subject, as published in the proceedings of August and October last, was read at the Agri-Horticultural Society's meeting:—

"I have now much pleasure in sending you a windmill pump complete, and I hope you will give it a good trial in a clear open spot.

"The pump now sent is more adapted for a large garden, tea or indigo plantation, &c., than for common native use, it being rather expensive. I am still engaged in trying experiments to determine the cheapest and best form of wind pump for the use of ordinary ryots. Any assistance the Society may be disposed to grant towards that object will be most acceptable.

"The present model is made with an old boat pump, and the wood work is very rough, the crank and revolving head are however of the best wrought iron, and I have no doubt but that you will be able to judge of the capabilities of wind when thus applied. The hose and sail cloths should be removed when the pump is not required, to prevent accidents from sudden squalls, and the whole of the iron work should be lubricated occasionally to prevent rust.

"A Warner's patent pump is the best adapted for wind power. The following is an estimate of the cost of a wind pump put up at Chittagong in Mr. Fuller's garden, and which he is very sanguine will be most useful during the ensuing hot weather. A report on its working will be sent to me:—

	Rs.	s.	d.
"Warner's 2½ inch patent pump ... ..	25	0	0
"Revolving head, crank, &c., lathe turned ... ..	50	0	0
"Wood work about ... ..	25	0	0
"Iron piping at 12 annas per foot ... ..	15	0	0
"Contingencies ... ..	5	0	0
<b>Total Rs. 120</b> ... ..	<b>0</b>	<b>0</b>	<b>0</b>

"The sails are set to an angle of 30°, which I find sufficient for ordinary work; one of them is weighted to assist the up stroke of the pump.

"A slight push is sufficient to turn the sails to the wind. The present ones will work the pump in a moderate breeze, but larger ones might be applied in very light winds, and smaller ones in strong monsoon gales, or the sail cloths would be reefed.

"A similar pump has been successfully used on board a ship. One saved the *Royal Visitor* in a gale of wind, and in the course of my surveying duties, I have seen hundreds of places where it would have been most useful, especially in Orissa.

"I shall be most happy to assist anyone who may wish to fit up a wind pump, and any suggestions for an improved one will be appreciated and tried.

"The favour of a report on the subject (after trial) is requested." Resolved, that Col. Wintle be requested to give this windmill pump a trial, and communicate the result to the Society.

#### THE ORISSA IRRIGATION WORKS.

SUFFICIENT time has elapsed since the commencement of these works, and we have been lately making enquiries as to how far they have fulfilled the object for which they were undertaken, and whether they are likely to prove a gain or loss to Government. We propose to review the subject under six heads, viz:

I. The history of the Irrigation Works of Orissa.  
II. The outlay already incurred and the probable total expenditure for the completion of the works.

III. The present and probable financial results of the works.

IV. The present state of the works and by what period the scheme is likely to be completed.

V. The loss the Government has incurred by the transfer of the works from the Irrigation Company.

VI. The practical influence of the Irrigation Works over the districts through which they have passed.

I. In 1860 a company was formed under an Act of Parliament entitled the East India Irrigation and Canal Company for opening artificial channels for the irrigation and navigation of different parts of India. It first took Orissa in hand. It was provided in the agreement of the Company with the Government of India that at the expiration of 20 years from the completion of the works it will forego the payment of the guaranteed interest by the Government. But the prospects of the Company were never promising. Situated as the people of Orissa were, poor, timid, and suspicious, it was hard to expect that they would take easily or quickly to artificial irrigation. With all their endeavours for seven years and a-half, the Company's officers did not succeed in persuading the people to take the water freely. Of 24,000 acres of land which were fit for irrigation and wet cultivation, the owners of not more than 300 acres applied for canal water. Complaints were rife among the ryots against the overseers of the Company, who were accused of forcing them to take the water. The prospects of the Company rested on a doubtful basis—we might say on mere chance—for it was only in times of drought the people could be expected to draw upon the canal to any large extent. The resources of the Company also diminished as the difficulties of realizing a revenue became apparent. The Government had at first taken a faint interest in the progress of the works of the Company. It was not until the famine of 1866 the Government awoke to the importance and usefulness of the undertaking. It was then an arrangement was made with the Government for an advance of 24 lakhs to the Company per annum. With a view to secure a speedy execution of the works the Government took a further step by organizing an Irrigation Department with Col. Randall, the Chief Engineer of the Company, at its head. Proposals were also made to Mr. Boothby, the Agent of the Company, by the Government to take over the works, but the directors at London were opposed to such an arrangement. In the meantime Mr. Boothby died, and the operations of the Company came almost to a deadlock. For some time the works were carried on slowly, but there was no life or vigor in the Company's establishment. At a meeting of the Company held in London in November 1868, they bitterly complained of the lukewarmness of the Government, with little justice we must confess, and expressed their willingness to retire from the field. They said in effect: "Our experience had brought to light the indifference, coolness, if not dislike, with which we were treated by Government. Our position with regard to Government is 'rather one of suzerainty than of good-will.' Left to our own resources as we are with calls for money from India to an extent which we are confident we are able to meet, the best, the safest plan for us is to surrender our property to Government under the reasonable terms." Negotiations were then opened, and Sir Stamford Northcote, the then Secretary of State, we believe, agreed to pay one crore of rupees, which was made up as follows:—

Total number of shares 45,000 at 100 Rs. each ... ..	4,500,000
Deduct for shares not fully paid ... ..	1,000,000
Probable amount paid by Government for the property ... ..	1,000,000
Add compensation ... ..	500,000
<b>Grand Total ... ..</b>	<b>5,000,000</b>



It behooves the Government to take speedy and serious notice of the impending fish famine, as its importance is such that it cannot be exaggerated. Rice and fish are the staple food of the Bengalis, and stand them in the same stead as bread and meat do our English working classes. The Bengalis may be pronounced:

ed semi-piscivorous, and if a grain (rice) famine produces among them directly starvation and death, a fish famine will inevitably ensue, their by no means at all times robust constitutions, which will excite a predisposition to disease, and render them less able to combat its effect, resulting eventually in increasing the death-rate of the country, and reducing the number of its population. Besides it is the bounden duty of our Government to encourage the consumption of fish as an article of subsistence, by exerting every means in its power to ensure an abundant supply, as it affords profitable employment to particular classes, or rather castes, of its Hindu subjects, to wit, *jahias*, *malos*, &c., who would, in case of a fish famine, find their vocation gone. Our very able and energetic Lieutenant-Governor is not likely to dally with the matter if it be brought prominently before him, and he is impressed with its vital importance.

The Native Press should draw attention to the subject, showing the evils resulting from the course of systematic neglect at present pursued, and the obvious advantages that Government interference will produce. This would have the effect of preparing the minds of the people for official action in the matter, and make them comprehend that it is intended for their benefit. Much needless alarm would thus be obviated, and the Government would not have their designs misconstrued. And I am glad to find that our local vernacular journal, the *Amrita Bazar Patrika*, has a long and well-considered article on the scarcity of fish, and its causes, in its last issue, and that the subject was noticed very fully once before, at least, in the same paper. Its editor appears to evince a deep interest in the welfare of the poor classes of natives, and deserves well of his countrymen, who should accord him their staunch support.

H. JAMES RAINEY.

Khulna, April 9th, 1871.

## PUBLIC WORKS AND THE PUBLIC SERVICE IN INDIA.

By Major Evans Bell, Author of "Our Great Vassal Empire," "The Oxus and the Indus," &c., and Lieut.-Col. Frederick Tyrrell, formerly Executive Engineer in Madras, Berar, the Central Provinces, and Oude. Trubner & Co. London.

### PREFACE.

The first of these two papers was unexpectedly received by me when the second was completely finished, the form and mode of its appearance being still undecided. It struck me at once that a joint publication would suit the purpose both of myself and my friend, and with his approval I took upon myself the task of editing and seeing it through the press. Our concert, properly speaking, has only extended so far, and Colonel Tyrrell ought only to be held responsible for the contents of his own essay.

In previously published works I have put forth strictures on the Indian Public Works Department, founded chiefly on native testimony and my own unprofessional observation, with some misgivings, not as to their substantial truth, not as to the existence of serious disease, but as to my diagnosis, and as to my power of holding debate in terms of art with the empirical practitioners who had got possession of the patient. This little book must derive all its weight and value from the proved competence and capacity of my coadjutor, who has graduated as an engineer by a regular apprenticeship and real work at home, and by fifteen years' employment in India.

During his well spent furlough of three years, terminating in the early part of 1852, Lieutenant (now Lieutenant-Colonel) Tyrrell acquired certified proficiency in geometry, trigonometry, surveying, plan-drawing and designing, under the instructions of Mr. Frederick Bumble, Civil Engineer, and Mr. James Walker, Engineer to the Admiralty and the Trinity House.

He obtained a practical knowledge of working in iron, by twelve months' personal exertion in the workshops of the well known firm of Messrs. Fox and Henderson at Birmingham. He so thoroughly learned the art of setting out and executing all the works of a railway, that he acted for upwards of a year as Executive Engineer of the Derry and Banisillen extension line. He also worked for four months under the Resident Engineer of the Middle Level Drainage in the counties of Bedford and Cambridge, at bridge building, setting out dykes, and various hydraulic operations. Furnished with satisfactory testimonials of these unusual qualifications, he returned to India in 1852, and during the whole of Lord Harris's Government of Madras was employed on special duty,—that is to say, on some duty for which no officer of the Madras Engineers, or at least none of the rank of captain, was considered competent.

His first task was that of surveying and setting out portions of the Madras Railway; when he overcame the grand difficulty of the line by taking it down the Moroor Ghaut, a pass which he discovered himself, from the Baramahal to the low country by Salem, with a gradient of one in a hundred. For this he received the thanks of the Court of Directors in a letter to the Madras Government, dated the 21st of February 1855.

He was also employed in 1854 to run flying levels, and to report on the line for the railway from Trichinopoly to Négapatam, which was done in a few months to the satisfaction of the Madras Government.

In 1856 Captain Tyrrell was chosen by the Government of Madras to report, from his own surveys and local observation, on the great Toongabuddra and Pennair Canal, projected by Sir Arthur Cotton. The special and independent nature of the duty entrusted to so young an officer, will be sufficiently explained in the following extracts of a demi-official letter to him from Colonel Faber, then Chief Engineer of the Madras Presidency, dated 9th July 1856:—

"You will have confided to you, assisted by a competent professional subordinate staff, the entire investigation of the noble project devised at home by Colonel Arthur Cotton, for the regeneration, as it were, of the whole of the Balaghat and ceded districts.

"The problem being laid before you, the determination of its conditions, the path which the canal should take, the slope of bed, hydraulic section of the channel, management by locks or falls, will have to be worked out solely and independently by yourself.

"It will rest solely with yourself as to the manner in which this interesting and most important duty is to be performed. You will work from whatever points may, in your own judgment, best and soonest test the enterprise. There will so far as I can foresee, be no interference with you of a departmental nature. You will be accredited both to the Collector and Civil Engineer; and work out the problem, and decide the scale of magnitude for its execution as best you can. A monthly progress report through the divisional Public Works office will be required, and in all other respects you will be uncontrolled.

"That which you have done, has been well done; but the future decision, involving your own fortunes, rests with higher authority. The offer that has now been made regarding Bellary is in itself flattering; and to one ambitious of personal distinction, and desirous of being a minister of good to millions, never, was there a finer opening."

The mutiny and rebellion of the next year, 1857, ever an immediate check to all such projects. The scheme reported, on by Captain Tyrrell has since been partially carried out by the Madras Irrigation Company, whose works affect, however, a much smaller area than was originally contemplated.

From 1857 to 1864 my friend was Executive Engineer in the Nizam's Assigned Districts of Berar; and from the latter year to 1867, when he retired on a pension, he filled the same office—in a higher grade—in the Central Provinces and in Oude.

EVANS BELL.

—Times of India.

## PRICES OF FOOD THROUGHOUT INDIA.—APRIL 1870—SEERS (2½ lbs.) PER RUPEE.

BENGAL (Rice, the staple food.)		Rice.	Wheat.			PUNJAB (Wheat and Jowar, the staples)		Rice.	Wheat.	Jowar.	Bajra.
BURDWAN DIVISION.	Burdwan .. ..	27½	22	Seers.	½ Rupee.	DELHI DIVISION.	Delhi .. ..	0	23	23	30
	Bansoorah .. ..	27½	19	"	"		Gurgaon .. ..				
	Bearbhoom .. ..	28	20	"	"	HISSAR	Karnal .. ..				
	Boghoaly .. ..	28	20	"	"		Hissar .. ..	10	21	26	36
	Bowrah .. ..	19	14	"	"		Rohtuk .. ..				
	Midnapore .. ..	28	10	"	"		Sirsa .. ..				
ODISHA "	Balasore .. ..	24	18	"	"	AMBALA	Ambala .. ..				
	Cuttack .. ..	21	12	"	"		Ludhiana .. ..	17	27	29	31
	Poorce .. ..	31½	10½	"	"		Shimla .. ..				
ASSAM "	Durrang .. ..	21	20	"	"	JULLUNDHUR.	Jullundhur .. ..	14	27	41	50
	Goalparah .. ..	17	20	"	"		Hoshiarpore .. ..				
	Kamroop .. ..	20	20	"	"		Kangra .. ..				
	Lucknow .. ..	13	10	"	"	AMRITSAR.	Amritsar .. ..	12	23	30	33
	Nowgong .. ..	16	10	"	"		Sealkote .. ..				
	Seetangur .. ..	16	10	"	"		Gurdaspore .. ..				
DACCA "	Dacca .. ..	23	11	"	"	LAHORE.	Lahore .. ..	18	24	31	35
	Backergunge .. ..	24	13	"	"		Ferozepore .. ..				
	Furzedpore .. ..	23	18	"	"		Gujeranwalla .. ..				
	Mymensing .. ..	23½	18	"	"	GUJERAT.	Rawul Pindi .. ..	12	16	26	26
	Sylhet .. ..	24½	16	"	"		Jhelum .. ..				
	Cachar .. ..	19	13½-16	"	"		Gujarat .. ..				
PATNA "	Patna .. ..	24½	24	"	"	MOOLTAN.	Mooltan .. ..	6	17	23	27
	Gya .. ..	23	24	"	"		Junag .. ..				
	Chumparan .. ..	24	23	"	"		Montgomery .. ..				
	Barun .. ..	22	27½	"	"		Mozaffungur .. ..				
	Shahabad .. ..	24	23	"	"	DEERA I KHAN.	Deera I. Khan .. ..	64	18	25	31
	Tirhoot .. ..	23	21	"	"		Deera G Khan .. ..				
BHAUGALPORE "	Bhaugulpore .. ..	20½-16	27½	"	"		Bunoo .. ..				
	Monghyr .. ..	27	27	"	"	PESHAWAR.	Peshawar .. ..	7	14	20	21
	Furneah .. ..	20	27	"	"		Kohat .. ..				
SOUTHAL PERSUNNAH	Godda .. ..	30	16	"	"		Huzara .. ..				
	Nya Doonkah .. ..	30	32	"	"	CENTRAL PROVINCES. (Wheat and Jowar the staple food.)					
	Rajmehal .. ..	29	21	"	"						
	Deoghur .. ..	29	21	"	"	NAGPORE	Nagpore .. ..	19½	19½	23	
PRESIDENCY "	Calcutta .. ..	25½	15	"	"		Bhandara .. ..				
	Nuddea .. ..	21½	19	"	"		Chanda .. ..				
	Jessore .. ..	27½-16	21½-16	"	"		Wardah .. ..				
RAJSHAHY "	24 Pergunnahs .. ..	33½	15½	"	"		Belaghat .. ..				
	Rajshahye .. ..	35	17½	"	"	JUNBULPORE.	Junbulpore .. ..	17	24	33	
	Bogra .. ..	30	28	"	"		Saugor .. ..				
	Dinapore .. ..	28	25	"	"		Bumoh .. ..				
	Maldah .. ..	25½-16	18	"	"		Mundla .. ..				
CHOTA NAGPORE "	Morshedabad .. ..	25	20	"	"	NERBUDDA.	Seonee .. ..	13	18	26	
	Patna .. ..	25	20	"	"		Baitool .. ..				
	Rungpore .. ..	25	20	"	"		Hoshungabad .. ..				
	Lohardugga .. ..	25	20	"	"		Chindwara .. ..				
	Hazareebagh .. ..	25	20	"	"		Nurah gpoce .. ..				
	Manthoom .. ..	25	20	"	"	CHUTTERBENGUR.	Nimai .. ..	33	20	36	
	Singbhoom .. ..	25	20	"	"		Raopore .. ..				
CHITTAGONG "	Chittagong .. ..	21	11½	"	"		Belaspore .. ..				
	Bulloosh .. ..	25	15	"	"	UPPER GODAVERY	Sumbulpore .. ..	7			
	Tipperah .. ..	24½	15	"	"		Serontha .. ..				
NORTH WESTERN PROVINCES (Wheat and Jowar, the staple food.)						MADRAS Rice and Cholum (Jowar) the staple food					
		Rice.	Wheat.	Jowar.	Bajra.			Rice	Jowar.		
MEERUT DIVISION	Dehra Doon .. ..	17	25	33	33	NORTHERN SECTION	Ganjam .. ..	256	180		
	Saharunpore .. ..						Vizagapatam .. ..	254	183		
	Moonschnugger .. ..						Godavery .. ..	252	183		
	Meerut .. ..						Katna .. ..	280	183		
	Beoindahabur .. ..						Nellore .. ..	235	171		
KUMAON "	Kumaon .. ..	12	15			CEDD DISTRICTS	Guddaph .. ..	261	179		
	Gurhwal .. ..	12	15				Belhary .. ..	385	143		
ROHILKUND "	Bijnour .. ..	19	27	34	34		Kurnool .. ..	372	181		
	Moradabad .. ..	19	27	34	34	EAST CENTRE	Madras .. ..	442	200		
	Budson .. ..	19	27	34	34		North Arcot .. ..	236	171		
	Bareilly .. ..	19	27	34	34		South Arcot .. ..	227	122		
	Shahjehanpore .. ..	19	27	34	34	CAUVREY.	Tamora .. ..	216	94		
	Tera Pergunnahs .. ..	28	26	24	24		Trichinopoly .. ..	234	146		
	Muttra .. ..	28	26	24	24	SOUTHERN SECTION.	Madura .. ..	265	170		
AGRA "	Agra .. ..	16	25½	31	28		Tinnevely .. ..	268	184		
	Farruckabad .. ..					WEST CENTRE.	Coimbatore .. ..	405	233		
	Mynpoorie .. ..						Nelligherries .. ..	427	267		
	Etawah .. ..					WEST	Salem .. ..	340	183		
	Jaloun .. ..						South Canara .. ..	340	183		
JHAUNSI "	Jhansi .. ..	13	21	33	25		Malabar .. ..	340	183		
	Lullipore .. ..					BOMBAY PRESIDENCY (Rice, Bajra, and Jowar, the staples)					
	Cawnpore .. ..							Rice	Jowar.		
ALLAHABAD "	Fatehpore .. ..	17	22	36	24	NORTHERN DIVISION	Ahmedabad .. ..	Rs 4			
	Banda .. ..						Kaira .. ..	5½			
	Allahabad .. ..						Sarat .. ..	5½			
	Humeerpore .. ..						Tannah .. ..				
	Jounpore .. ..					SOUTHERN DIVISION	Poonah .. ..	34		21	
	Goruckpore .. ..	23	22	27	20		Ahmednuggur .. ..				
	Buxteh .. ..						Kuladghsee .. ..	34		1½	
BENARES "	Asimgurh .. ..	16	18	22	20		Rutnagherry .. ..	34			
	Mirzapore .. ..						Belgaum .. ..	34			
	Benares .. ..						Dharwar .. ..	34			
	Ghaseepore .. ..						Sadara .. ..	34			
	Ajmare .. ..	8	14	21	18		Carwa .. ..				
AMBER "						SINDH	Kurachee .. ..				
							Hyderabad .. ..				
							Sukkur .. ..	5			
GUJH. (Wheat and Jowar, the staples.)						BURMAH (Rice, the staple)					
		Rice.	Wheat.	Jowar.	Bajra.			Rice			
LOCKSEW DIVISION	Lucknow .. ..	18	20	31	23	ARAKAN.	Arakan .. ..	3 4 0			
	Benarsh .. ..						Bamree .. ..				
	Benarsh .. ..						Sandoway .. ..				
BANGALORE "	Bangalore .. ..	18	31	56	31		Northern Arakan .. ..				
	Benarsh .. ..					PRGU	Rangoon .. ..	3 7 0			
	Benarsh .. ..						Bassah .. ..				
	Benarsh .. ..						Myanwang .. ..				
HYDRABAD "	Hydrabad .. ..	21	27	42	19		Frome .. ..				
	Benarsh .. ..						Toungthoo .. ..				
	Benarsh .. ..					TEKASCHIN	Amherst .. ..	3 0 0			
	Benarsh .. ..						Lavoy .. ..				
BOY BANGALORE "	Boy Bavelly .. ..	18	24		24		Mengul .. ..				
	Benarsh .. ..						Shweyteen .. ..				
	Benarsh .. ..										
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## THE PUBLIC REVENUE AND EXPENDITURE.

Revenue and Expenditure of the Government of India for the eleven months of the year 1870-71, as compared with the corresponding period of 1869-70.

Revenues and Receipts	April 1869 to Feb. 1870	April 1870 to Feb. 1871	Increase. £	Decrease. £	Expenditure.	April 1869 to Feb. 1870	April 1870 to Feb. 1871	Increase. £	Decrease. £	
	£	£	£	£		£	£	£	£	
Land Revenue .....	17,837,188	17,494,497	157,309	...	Interest on Funded and Un- funded Debt .....	2,457,846	2,075,097	117,281	...	
Tributes, &c, from Native States .....	898,759	843,841	...	54,918	Interest on Service Funds and other Accounts .....	589,555	504,463	...	65,072	
Forest .....	370,743	329,730	...	41,013	Refunds and Drawbacks .....	331,438	309,524	...	21,904	
Excise on Spirits and Drugs .....	2,012,568	2,126,843	114,055	...	Land Revenue .....	2,136,751	2,143,792	...	7,041	
Assessed Taxes .....	927,916	1,853,979*	926,063	...	Forest .....	284,654	329,935	65,281	...	
Customs .....	2,144,344	2,310,624	166,280	...	Excise on Spirits and Drugs .....	228,819	253,057	24,238	...	
Salt .....	5,321,000	5,577,955	256,950	...	Assessed Taxes .....	86,899	39,806	...	47,093	
Opium .....	7,812,744	7,801,529	...	11,215	Customs .....	165,726	189,470	23,744	...	
Stamps .....	2,038,864	808,446	...	1,230,418	Salt .....	359,594	359,273	...	321	
Mint .....	153,905	31,116	...	122,789	Opium .....	723,616	1,938,724	215,108	...	
Post Office .....	628,276	764,961	136,685	...	Stamps .....	92,222	51,157	...	41,065	
Telegraph .....	159,199	235,905	76,706	...	Mint .....	78,919	53,476	...	25,443	
Law and Justice .....	648,639	2,245,891	1,597,052	...	Post Office .....	598,074	571,496	...	26,578	
Police .....	246,506	235,835	...	10,671	Telegraph .....	362,247	297,452	...	64,795	
Marine .....	304,460	216,831	14,371	...	Administration .....	1,076,771	1,087,527	...	89,244	
Education .....	68,948	56,808	...	12,140	Minor Departments .....	1,09,769	186,556	...	17,803	
Interest .....	288,871	242,462	...	46,409	Law and Justice .....	2,574,862	2,674,272	99,410	...	
Miscellaneous .....	709,315	510,689	...	198,626	Police .....	2,108,575	2,055,738	...	142,837	
					Marine .....	384,867	347,094	...	37,793	
					Education .....	562,197	543,574	...	18,623	
					Ecclesiastical .....	146,688	139,407	...	7,281	
					Medical Services .....	410,742	450,777	40,035	...	
					Stationery and Printing .....	215,321	197,950	...	17,371	
					Political Agencies .....	362,987	286,372	...	126,615	
					Allowances, &c, under Treaties & Engagements .....	1,197,085	1,893,271	196,236	...	
					Miscellaneous .....	592,696	811,597	218,899	...	
					Superannuation, &c, Al- lowances .....	595,837	608,063	12,246	...	
Total .....	41,467,493	42,986,781	3,247,471	1,728,233	Total .....	19,934,209	20,279,080	992,516	647,645	
	From April to	Dec only				From April to	Decem- ber only			
Army .....	740,191	633,104	...	107,087	Army .....	9,362,409	8,804,034	...	558,375	
Public Works Ordinary .....	Miscellaneous Receipts ..	101,295	59,708	11,587	Public Works Ordinary .....	Public Works Guaranteed. Railway Ex- change, Leas. State Rail- ways .....	3,877,872 50,637 316,196 3,740	2,475,763 59,641 84,195 5,597	...	1,402,109 9,004 ...
	Irrigation Re- ceipts ..	370,293	337,875	32,418					...	232,001
	Railway Ex- change, Gain State Rail ways Traffic Receipts ...	296,245	92,785	203,460	Do. Extraordinary—Irri- gation, &c .....				1,857	...
		7,270	4,237	3,033	Do. State Railways .....	663,216	465,514	197,702	...	196,802
Do Extraordinary do Capital Account .....		1	2,914	2,913		22,540	159,515	136,975	...	...
Total Revenues .....	£ 41,982,788	44,147,354	3,250,384	2,085,818	Total Expenditure .....	£ 34,230,919	32,334,339	1,140,352	3,086,582	

\* Includes Income Tax realised in the Military and Public Works Departments for nine months only.

† Includes Refunds in the Military and Public Works Departments for nine months only.

## SAVINGS' BANK RETURNS.

Dr BALANCE SHEET OF THE BOMBAY GOVERNMENT SAVINGS' BANK FOR THE OFFICIAL YEAR 1869-70. Or.

	Rs.	A.	P.		Rs.	A.	P.
To Amount due to 15,678 Depositors .....	44,11,869	2	8	By Cash in Her Majesty's Treasury at the New Bank of Bombay, Limited .....	44,21,173	10	6
Do. do. Government .....	9,666	10	3				
Do. Balances under one Rupee consolidated..	181	12	3				
Do. Suspense Account .....	6	1	4				
Rupees...	44,21,173	10	6	Rupees...	44,21,173	10	6

## STATEMENT OF TRANSACTIONS OF DISTRICT SAVINGS BANKS FOR THE WEEK ENDING 30TH APRIL 1871.

Province.	Banks open.	Deposits. Amount	No.	Withdrawals. Amount Principal.	Amount Interest.	Balance
		Rs. a. p.		Rs. a. p.		Rs. a. p.
Bengal .....	22	2,475 5 0	15	350 1 21	...	78,551 6 10
North-Western Provinces .....	11	1,498 15 0	...	...	...	23,599 0 7
Punjab .....	7	993 0 0	2	36 2 0	...	3,227 18 5
Oudh .....	2	500 0 0	...	...	...	2,122 0 0
Central Provinces .....	4	45 0 0	2	380 0 0	...	11,273 0 0
British Burma .....	3	300 0 0	...	...	...	4,678 0 0
Berar .....	3	435 0 0	...	...	...	3,444 0 6
India .....	1	...	...	...	...	4,500 0 2
Total .....	53	6,246 4 0	19	1,316 3 21	...	95,095 6 10

STATEMENT showing the Amount of each kind of CURRENCY NOTES of the BOMBAY CIRCLE in circulation on the 22nd and 30th day of April 1871.

Date.	Denomination of Notes.						Total Value.
	10 Rs. Value.	20 Rs. Value.	50 Rs. Value.	100 Rs. Value.	500 Rs. Value.	1,000 Rs. Value.	
<b>1870.</b>							
15th December...	27,82,760	15,02,500	20,79,100	55,77,700	22,46,500	2,69,69,000	4,11,47,660
31st December...	27,12,560	14,75,060	20,22,000	54,09,800	22,61,000	2,71,76,000	4,10,56,910
<b>1871.</b>							
22nd April .....	29,75,530	15,19,660	21,26,550	59,56,500	20,42,000	3,29,85,000	4,70,05,240
30th April .....	29,12,860	15,53,780	21,98,700	57,19,200	20,89,500	3,17,85,000	4,62,04,040

STATEMENT of the amount of INDIAN GOVERNMENT CURRENCY NOTES IN CIRCULATION of the amount of COIN and BULLION RESERVE, and of the GOVERNMENT SECURITIES held by the Department of Issue of Indian Paper Currency.

Date.	Circles of Issue.	Balance of Issue Account.	Retired by other Offices of Issue	Currency Notes in circulation.	Silver Coin Reserve.	Silver Bullion Reserve.	Gold Bullion Reserve.	Reserve in Government Securities.	Total Reserve.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
31st March 1871	Calcutta	3,59,37,910	5,07,860	3,51,30,050	99,69,596	33,58,488	72,495	1,42,42,331	2,76,42,800
	Ditto	58,13,790	15,96,750	72,77,040	61,00,726	...	...	17,28,404	78,29,130
	Ditto	4,78,02,150	46,07,980	4,81,94,220	2,79,88,658	22,15,371	...	1,81,49,861	4,52,81,590
	Ditto	71,47,270	17,08,470	54,38,800	51,81,219	...	...	11,03,291	62,84,510
	Ditto	75,03,170	30,23,130	44,80,040	62,21,913	...	...	7,00,037	69,21,950
	Ditto	10,85,010	1,01,400	9,83,610	7,91,031	...	...	1,00,059	8,91,090
	Ditto	12,00,200	8,61,810	3,48,390	9,74,321	...	...	1,00,059	10,74,380
	Ditto	4,03,780	30,630	3,73,100	2,35,041	...	...	1,00,059	3,35,100
	Ditto	32,35,900	5,82,730	26,53,170	20,09,168	...	...	5,47,902	25,57,070
	Ditto	47,67,760	24,47,170	23,20,590	42,20,854	...	...	5,00,106	47,20,960
	Ditto	21,11,610	2,37,710	18,73,900	8,84,000	...	30	...	8,84,030
	Total	12,00,06,500	1,56,85,590	10,13,72,910	6,45,76,517	55,73,559	72,525	3,22,72,009	10,43,72,910

SILVER received and coined in the MINTS of CALCUTTA, MADRAS, and BOMBAY, 1870-71.

	CALCUTTA.			MADRAS.			BOMBAY.		
	Bullion or Coin received during the month valued in Rupees.		Coined and examined during the month valued in Rupees.	Bullion or Coin received during the month valued in Rupees.		Coined and examined during the month valued in Rupees.	Bullion or Coin received during the month valued in Rupees.		Coined and examined during the month valued in Rupees.
	Govt.	Merchants.		Govt.	Merchants.		Govt.	Merchants.	
September .....	89,122	8,28,445	...	...	...	...	40,524	49,655	3,28,565
October .....	8,487	2,12,378	...	...	8,903	...	8,241	1,09,243	1,58,635
November .....	530	80,349	...	...	3,806	...	1,44,504	92,117	...
December .....	2,800	1,81,929	...	...	...	...	...	1,61,541	...
January 1871 .....	1,859	15,242	...	...	...	...	2,84,421	3,01,662	...
February .....	1,48,344	6,914	...	...	1,504	...	...	3,86,906	49,987

CASH BALANCES in the GOVERNMENT TREASURIES in INDIA, 1870-71 contrasted with previous Years.

	August.	October.	November.	December.	Jan 1871.	Feb. 1871.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Government of India	1,36,15,865	1,47,55,373	1,83,59,723	1,99,30,320	2,84,13,697	3,16,28,045
Bengal	1,12,23,907	1,28,20,478	1,21,74,892	1,85,42,355	1,76,89,850	1,49,37,750
British Burmah	32,10,450	41,59,840	36,45,337	81,32,587	21,54,998	28,50,376
North-Western Provinces	2,14,98,002	1,52,06,179	1,96,74,077	2,34,78,368	2,66,81,640	2,44,20,225
Oudh	58,75,649	36,55,325	47,42,276	53,89,890	65,27,100	56,89,247
Punjab	1,08,05,965	88,31,333	92,46,574	1,11,23,599	1,11,97,672	1,21,01,569
Bombay	2,36,10,012	1,83,75,648	1,83,67,691	1,79,41,564	2,36,81,551	2,99,57,343
Central Provinces	61,53,053	56,81,606	56,52,447	61,03,790	78,77,198	76,78,822
Madras	2,75,09,563	2,43,76,457	2,56,50,415	2,86,76,113	2,85,61,342	2,78,54,688
	12,29,02,765	10,78,15,383	11,75,13,372	12,84,78,346	15,27,03,438	15,57,99,599
The same month 1869-70	9,63,10,342	7,89,60,348	7,15,22,402	8,01,62,355	8,78,86,400	8,69,56,718
" " " " 1868-69	10,02,45,204	7,04,14,121	8,14,11,823	9,77,03,951	11,23,90,970	12,09,21,265



## THE BANK OF BENGAL.

STATEMENT OF AFFAIRS.		26th April 1871.	
LIABILITIES.		Rs.	A. P.
Proprietors' Capital, paid up	...	2,20,00,000	0 0
Reserve Fund	...	15,94,559	0 0
General Treasury Balance at Head Office	...	2,85,04,020	1 2
Ditto at Branches	...	1,61,25,597	0 0
Other Deposits at Head Office and Branches	...	2,24,61,182	7 6
Bank Post Bills, &c.	...	9,60,675	3 8
Sundries	...	7,58,946	14 9
Total Rs.	...	9,33,74,781	2 1
ASSETS.		Total Rs.	
Government Securities	...	1,00,86,411	6 0
Loans on Government Office and Branches	...	61,40,141	3 9
Accounts of Credit on do.	...	46,17,259	2 5
Mercantile Bills discounted at do.	...	2,43,50,149	12 5
Dead Stock	...	11,56,572	12 5
Stamps	...	14,250	2 0
Advances with other Banks.	...	3,32,574	0 3
Rundies	...	1,08,009	15 7
Cash and Currency Notes at Head Office.	...	2,26,36,084	11 5
Cash and Currency Notes at Branches	...	2,36,72,888	15 10
Total Rs.	...	9,33,74,781	2 1

## THE NEW BANK OF BOMBAY.

STATEMENT OF AFFAIRS.		29th April 1871.	
LIABILITIES.		Rs.	A. P.
Proprietors' Capital, paid up	...	50,00,000	0 0
Subscriptions on account of new Capital	...	10,00,000	0 0
General Treasury Balance.	...	1,33,17,525	0 0
Deposits at Head Office	...	2,01,43,728	0 0
Deposits at Branches.	...	55,11,697	0 0
Bank Post Bills outstanding	...	40,922	0 0
Reserve	...	4,15,000	0 0
Undrawn Cash Credits	...	6,90,302	0 0
Total Rs.	...	4,61,19,175	0 0
ASSETS		Total Rs.	
Government Securities	...	47,82,784	0 0
Loans at Hd. Office & Branches on Gov. Sec. &c.	...	14,91,203	0 0
Credit Accounts do. do. on Gov. Sec.	...	22,93,367	0 0
Bills discounted and purchased at do.	...	1,10,96,135	0 0
Dead Stock and Less written off	...	4,45,659	0 0
Stamps	...	5,923	0 0
Balance with Agents and Correspondents.	...	10,95,061	0 0
Overdrafts	...	10,370	0 0
Government Reserve Cash.	...	2,48,83,431	0 0
Cash and Currency Notes at Head Office.	...	...	...
do. at Branches.	...	...	...
Bullion at H. O. and Branches	...	5,75,212	0 0
Total Rs.	...	4,61,19,175	0 0

## THE BANK OF MADRAS.

STATEMENT OF AFFAIRS.		30th April 1871.	
LIABILITIES.		Rs.	A. P.
Capital.	...	56,56,000	0 0
Public Deposits at Head Office	...	68,68,334	11 8
Do. at Branches.	...	45,15,905	7 1
Other deposits at Head Office and Branches	...	1,05,08,070	7 2
Cash Credits undrawn at do	...	2,81,570	0 10
Post Bills	...	64,008	8 9
Reserve Fund.	...	5,68,500	0 0
Rest	...	2,07,640	7 4
Total Rs.	...	2,79,46,330	10 11
ASSETS.		Total Rs.	
Silver and Notes at Head Office	...	43,77,506	0 8
Silver and Notes at Branches	...	77,66,773	10 0
Government Securities	...	5,83,194	0 8
Government Reserve—Cash	...	37,80,564	11 8
Securities	...	...	...
Loans at Head Office and Branches	...	16,08,897	15 7
Accounts of Credit at Head Office and Branches	...	5,86,960	0 0
Mercantile Bills discounted at Head Office and Branches	...	67,76,883	2 7
Dead Stock at Head Office and Branches.	...	2,33,188	10 2
Bills of Exchange do	...	19,46,210	7 7
Due by other Banks.	...	5,68,809	0 0
Total Rs.	...	2,79,46,330	10 11

Government Promissory Notes enforced for Payment of Interest in London, under deduction of Amount re-transferred to India, and Outstanding in the Books of the Bank of Bengal.

Particulars.	4 per cent. Loan.						4 1/2 per cent.		5 per cent.		5 per cent. Debentures for					Total Amount.				
	24 per cent. Loan of 1863-64, 1864-25, 1865-29, 1867-33.	of 1865-36.	of 1866-43.	of 1864-55.	Transfer of 1865.	Transfer of 1866-67, dated 18th July 1866.	T. W. of 1864-55.	of 1865-57.	5 1/2 per cent. Loan of 1866-67.	2 years.		3 years.		5 years.	10 years.		15 years.			
										Repayable Jan. 1869	4 1/2 per cent. Transfer Loan.	Repayable Jan. 1870.	4 1/2 per cent. Transfer Loan.	Repayable June 1872.	Repayable June 1877.		Repayable June 1877.			
31st August 1870.	58,100	54,135	2,77,20,400	41,14,200	1,50,94,400	1,23,05,700	1,65,85,700	14,500	47,21,500	2,46,200	5,76,46,500	4,41,02,800	.....	60,000	1,65,000	13,50,000	38,08,000	23,60,000	38,00,000	16,83,65,986
30th Sept. 1870.	58,100	54,135	2,34,70,54,614	42,06,200	1,51,31,600	1,24,08,300	1,72,67,700	14,500	47,94,500	2,25,100	5,84,23,000	4,52,18,300	.....	.....	1,65,000	12,90,000	38,58,000	33,60,000	38,16,000	17,16,61,366
31st Oct. 1870 ..	58,100	54,135	2,34,70,54,614	43,11,700	1,53,35,300	1,24,27,600	1,83,32,400	14,500	48,05,000	2,03,300	5,87,31,000	4,63,50,000	.....	.....	1,65,000	18,60,000	38,58,000	34,15,000	38,19,000	17,50,18,994
30th Nov. 1870.	58,100	54,135	2,34,70,53,908	43,62,900	1,53,66,100	1,25,12,000	1,88,67,600	14,500	48,29,500	1,86,700	5,92,13,300	4,76,20,000	.....	.....	1,65,000	.....	38,63,000	34,15,000	38,48,000	17,78,74,588
31st Dec. 1870 ..	58,100	54,135	2,34,70,53,468	41,43,100	1,53,55,100	1,23,79,800	1,83,26,100	14,500	48,78,100	87,700	5,96,27,700	4,88,75,900	.....	.....	38,63,000	.....	38,46,000	34,81,000	38,81,000	17,80,14,046
30th Jan. 1871 ..	58,100	54,135	2,34,70,53,908	41,45,000	1,53,22,200	1,23,85,000	1,84,22,500	14,500	48,84,500	88,700	5,99,10,100	4,86,76,300	.....	.....	1,65,000	18,60,000	38,58,000	34,60,000	38,81,000	17,82,40,315
15th March 1871.	58,100	54,135	2,34,70,53,347	41,41,100	1,53,45,300	1,23,63,500	1,67,04,200	14,500	48,73,500	70,200	5,95,92,400	4,81,89,600	.....	.....	1,65,000	18,80,000	38,58,000	34,60,000	38,14,000	17,87,72,297
14th April 1871.	58,100	54,135	23,47,02,347	41,34,600	1,51,05,400	1,24,02,100	1,69,07,500	14,500	48,38,100	69,700	5,78,69,000	4,51,63,400	.....	.....	1,65,000	18,60,000	38,15,400	34,60,000	38,50,000	17,89,49,597

## BOMBAY SHARE LIST.

London..	Cotton	2 3/4	18	0d	} per ton
	Cases	2 7/8	0s	0d	
	Seeds	2 1/2	10s	0d	
	Iron Ships Cotton	2 1/2	15s	0d	
	Wooden Ships "	2 1/2	12s	6d	
	Myraopolais & Coir bales	2 1/2	12s	6d	
	Seeds	2 1/2	10s	0d	
	Cotton	2 1/2	10s	0d	
	Coffee	2 1/2	10s	0d	
	Overland Steamers	2 1/2	10s	0d	
I Liverpool via Suez Canal	Steamer Cotton	2 1/2	10s	0d	} per ton
	Opium	2 1/2	10s	0d	
China	Sailing Ships	2 1/2	10s	0d	
	Salt	2 1/2	10s	0d	
Calcutta to Bombay	Opium	2 1/2	10s	0d	
Mourning	Opium	2 1/2	10s	0d	
	Opium	2 1/2	10s	0d	
	Opium	2 1/2	10s	0d	
	Opium	2 1/2	10s	0d	
	Opium	2 1/2	10s	0d	
BOMBAY					
For Liverpool--	Iron ships, cotton	2 1/2	15s	0d	} per ton
	Wooden ships do	2 1/2	12s	6d	
For London--	Cotton	2 1/2	10s	0d	
	Seeds	2 1/2	10s	0d	
	P. & O. Steamers	2 1/2	10s	0d	
	B. & S. Steamers	2 1/2	10s	0d	
For China--	Cotton--Steamer	2 1/2	10s	0d	
	Opium--Steamer Hong Kong	2 1/2	10s	0d	
	Opium--Steamer Hong Kong	2 1/2	10s	0d	
	Opium--Steamer Hong Kong	2 1/2	10s	0d	